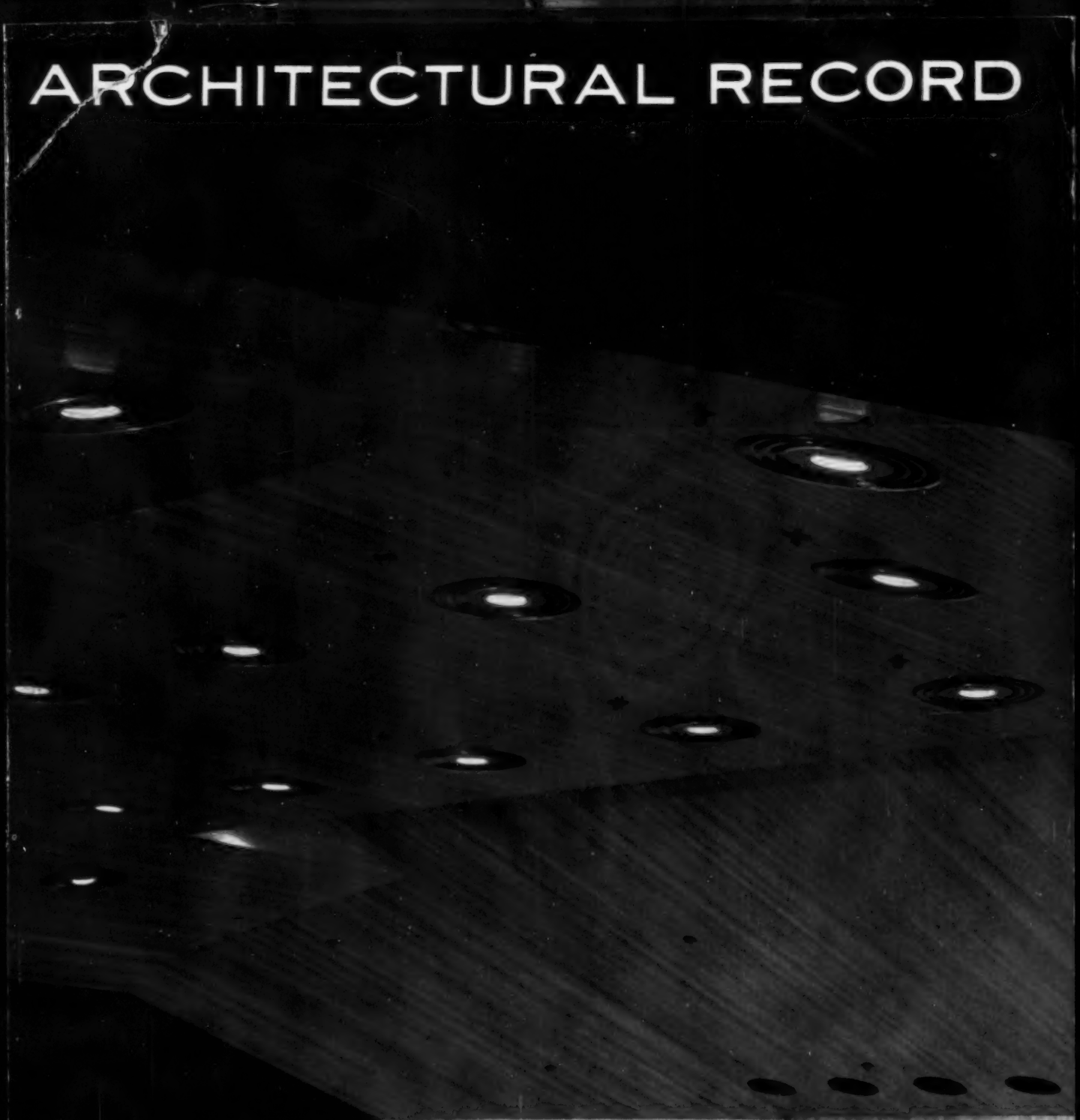
ARCHITECTURAL RECORD



BUILDING TYPES STUDY

BUILDINGS FOR THE AGING

234

MAY 1956

PRUDENTIAL

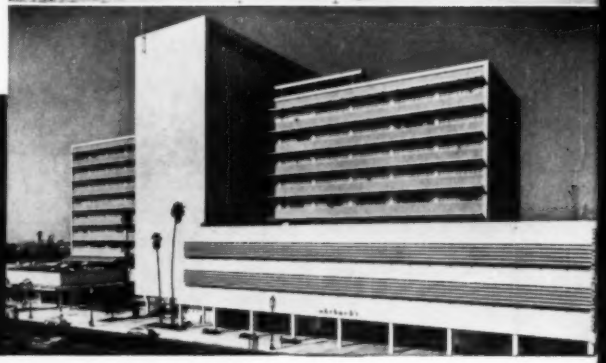
INSURANCE COMPANY OF AMERICA

Left—Prudential Insurance Bldg., Jacksonville, Fla. Archt.—Kemp, Bunch & Jackson; Engr.—Reynolds, Smith & Hills; Contr.—Daniel Construction Co. Pozzolith Ready-Mixed Concrete supplied by Capitol Concrete Co.—all of Jacksonville.

Below—Prudential Office Building, Minneapolis, Minn. Archt. and Engr.—Magney, Tusler & Setter; Contr.—C.F. Haglin & Sons Co. Pozzolith Ready-Mixed Concrete supplied by Ready-Mixed Concrete Co.—all of Minneapolis.

Left—Prudential Building, Chicago, Illinois. Archt.-Eng.—Naess & Murphy; Contr.—Geo. A. Fuller Co.; Pozzolith Ready-Mixed Concrete supplied by Material Service Corp.—all of Chicago.

Right—Prudential Insurance Co., Los Angeles, Calif. Archts.—Walter Wurdeman and Welton Becket; Engr.—Murray Erick Associates; Gen. Contr.—Wm. Simpson Co.—all of Los Angeles. Pozzolith Ready-Mixed Concrete supplied by Transit Mixed Concrete Co., Pasadena.



POZZOLITH employed for improved control of Concrete Quality...

"for the same owner time and time again"

These outstanding Prudential office buildings are representative of the many structures—often for the same owner time and time again—where Pozzolith has proved a valuable aid in economically obtaining concrete of desired properties. This is because Pozzolith provides the following three controls required for optimum concrete performance.

1. ***Control of water content***...lowest possible unit water content for a given workability. Results in greatly improved concrete quality and economy.
2. ***Control of entrained air***...for designed strength with required durability and low permeability.
3. ***Control of rate of hardening***...for speed where needed, for retardation where required—in any event good uniform concrete.

Any of our more than 75 field technical men will be glad to demonstrate the full advantages of Pozzolith for *your* project.

COLORED MOTION PICTURE, "The Man With The Trowel", shows how Pozzolith and its adaptations—through control of water, air and rate of hardening—greatly improve your control of concrete quality. Film available for private showing to groups of any size.

MASTER BUILDERS PRODUCTS

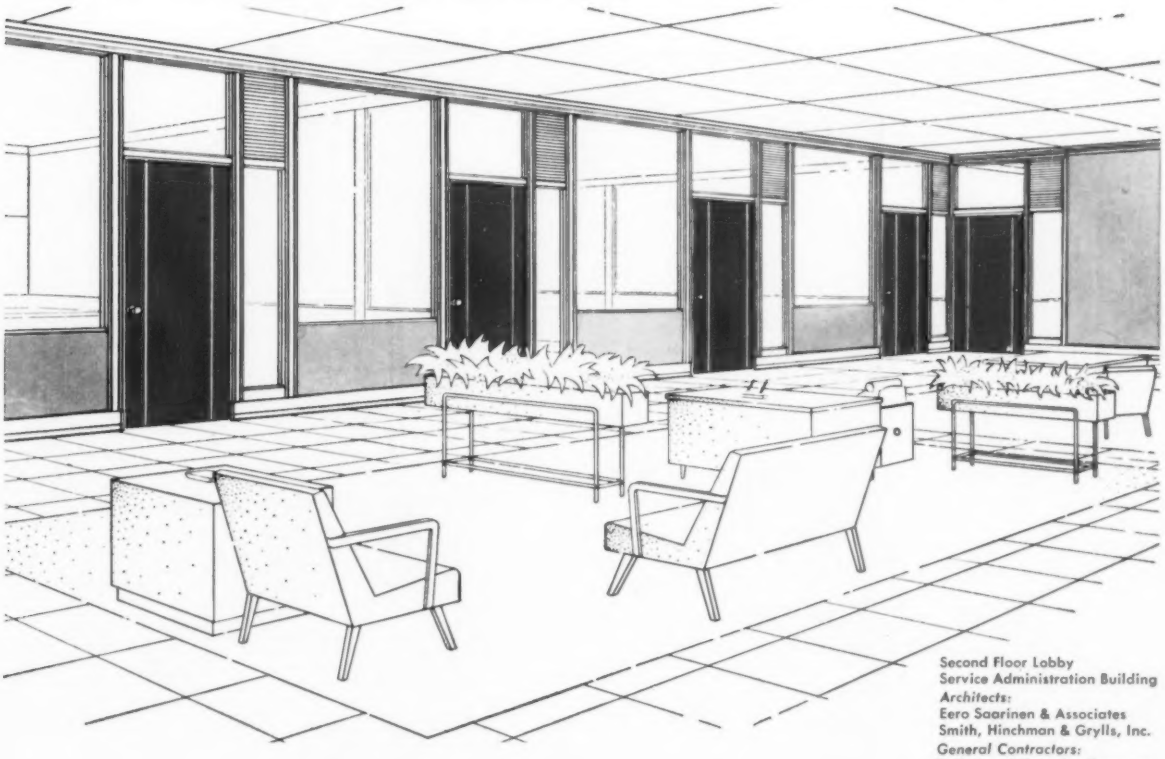
the MASTER BUILDERS co.

Division of American-Marietta Company

Cleveland 3, Ohio — Toronto 9, Ontario Cable Address, Mastmethod, N.Y.

ARCHITECTURAL RECORD (Vol. 119, No. 5, May 1956) is published monthly, except May 1956 when semi-monthly, by F. W. Dodge Corporation, 10 Ferry Street, Concord, N. H. **Editorial and executive offices: 119 West 40th Street, New York 18, New York.**
(Western Edition)
$5.50 per year in U. S., U. S. Possessions and Canada. *Second-class mail privileges authorized at Concord, N. H.*

In the beautiful new GENERAL MOTORS TECHNICAL CENTER...



Second Floor Lobby
Service Administration Building
Architects:
Eero Saarinen & Associates
Smith, Hinchman & Grylls, Inc.
General Contractors:
Bryant and Detwiler Company

185,000 lineal feet of
MOVABLE HAUSERMAN INTERIOR WALLS

The new, brilliantly designed GENERAL MOTORS TECHNICAL CENTER near Detroit is dedicated to the steady improvement of the corporation's products. Its advanced equipment and vast facilities are devoted to achieving this purpose efficiently. In keeping with this aim, Movable HAUSERMAN Interior Walls were selected for all the center's buildings. These versatile walls, easily moved and easily maintained, will keep pace with the phenomenal advances this center promises.

The HAUSERMAN Walls . . . more than 35 miles . . . were fabricated as the startlingly beautiful exterior took shape. Then the interior literally flowed into place as skilled HAUSERMAN erection crews installed hundreds of feet a day.

These miles of walls feature refreshing colors, punctuated by HAUSERMAN doors of contrasting tones. These are colors which will remain fresh and bright for many years. HAUSERMAN'S baked-enamel finish will require only periodic soap-and-water washing to maintain its distinctive beauty.

The Technical Center dramatically illustrates the many benefits HAUSERMAN offers to architect, builder and owner. For facts about other applications, large or small, contact your nearby HAUSERMAN office. Consult the Yellow Pages and call today.

MOVABLE HAUSERMAN INTERIORS
National Lifetime Service
An Exclusive Hauserman Dividend

FREE DATA MANUAL 55 WINS ARCHITECTS' AWARD

Recognized for value to architects in design and specifications work, this 100-page guide was awarded *The Certificate of Exceptional Merit* in 7th Annual Building Products Literature Competition co-sponsored by A.I.A. and Producer's Council. Contains complete technical details on all types of Movable HAUSERMAN Interiors. Send for your copy today.

THE E. F. HAUSERMAN COMPANY
7210 Grant Avenue • Cleveland 5, Ohio
Please send your new Data Manual 55 to:

Name _____

Company _____ Title _____

Street _____

City _____ Zone ____ State _____

Rotary Oildraulic® Elevator will lift

NEW YORK COLISEUM, NEW YORK CITY

OWNER: Triborough Bridge & Tunnel Authority

ARCHITECTS: Leon and Lionel Levy

ADVISORY ARCHITECTURAL COMMITTEE: Aymer Embury II, Eggers & Higgins, John B. Peterkin

ENGINEERS: Guy B. Panero

STRUCTURAL ENGINEER: Jacob Feld

GENERAL CONTRACTORS: Walsh-Fuller-Slattery (joint venture)

ROTARY OILDRAULIC ELEVATING EQUIPMENT installed by Burwak Elevator Co., New York

75,000 lbs. in mammoth New York Coliseum

HUGE ELEVATOR CAR RISES 62 FEET ON 3 HYDRAULIC JACKS

The new $35 million Coliseum in the heart of Manhattan is big . . . even by New York standards. It has a four-level exhibition hall, lobby a block and a half long, a 20-story superimposed office building . . . and one of the largest elevators in the world.

The elevator was designed and built by Rotary Lift Co. to handle any object that might be displayed in the vast expanse of the Coliseum, from a luxurious yacht to a complete highway tractor-trailer unit.

Oil-hydraulic operation

Three 15" diameter oil-hydraulic jacks, powered by Rotary Oildraulic electric power units, support and raise the elevator. Sixteen equalized guide shoes on double guide rails, developed by Rotary Lift Co. for this installation, steady the giant car and its load during the 62-foot rise. Rugged construction of all mechanical parts and precise controls assure complete safety.

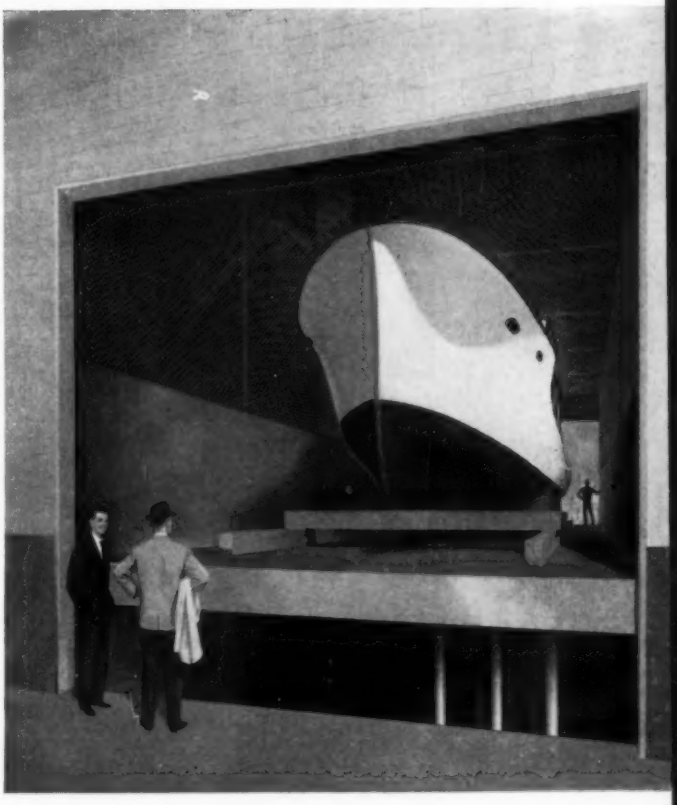
Economical and dependable

In unusual applications like this, as well as in simple, small-capacity elevators, Rotary Oildraulic equipment offers many installation and operation advantages.

Because the car and its load are supported by an oil-hydraulic jack, there is no need for an expensive penthouse or heavy load-bearing sidewalls.

Consistently smooth, dependable performance has been proved in thousands of installations.

For improved building design at lower cost, investigate the possibilities of Rotary Oildraulic Elevators on your next job. Factory-trained personnel in a national distributor organization will help you with plans and specifications . . . and provide reliable installation and maintenance service. Look for "Rotary Oildraulic" under "Elevators" in the yellow pages of your phone book.



***This big Rotary Oildraulic Elevator** lifts heavy, bulky objects from ground floor truck ramp to any exhibition hall level in the New York Coliseum. (Vertical bi-parting elevator doors are not shown in this artist's drawing.) Three Levelator® Lifts, also built by Rotary Lift Company, are included in an ingenious arrangement of elevating equipment.*

SEE OUR CATALOG IN SWEET'S

Rotary®

Oildraulic® Elevators

PASSENGER AND FREIGHT

Engineered and built by Rotary Lift Co., 1103 Kentucky, Memphis 2, Tenn.
Specialists in oil-hydraulic elevators and lifts.

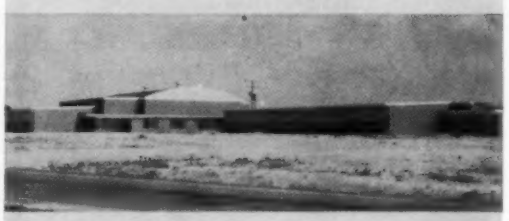
WROUGHT IRON PIPE EXPELS CORROSION

FROM THE RADIANT HEATING SYSTEMS IN THESE MODERN SCHOOLS

Custer Consolidated School

Lakeshore School

Edmonson Junior High School



Camden Frontier School

Ladywood High School

In these five schools, designed by Mr. Walter T. Anicka, Architect, Ann Arbor, Michigan, wrought iron pipe was selected to safeguard the radiant heating systems against the threat of corrosion and the resulting premature failures.

There are good reasons for this selection. Here, as in the thousands of other radiant heated structures using wrought iron pipe, this time-tested material answered the need for *ease of installation, dependability in service.* Wrought iron pipe is simple, easy and fast to install because it takes short radius bends, without spring-back. It produces sound welds, free from pin-hole leaks. When threading is necessary, wrought iron's uniform structure assures sharp, full-depth threads. Another installation advantage is wrought iron's ability to withstand mechanical damage. In service, wrought iron pipe is more than a match for corrosive threats, stays on the job longer, at lower costs per year.

Our bulletin, *Wrought Iron Pipe for Radiant Heating,* gives complete details. Write for your copy.

A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, San Francisco. Export Department: New York, N.Y.

BYERS

See our display in booth #6 at the A.I.A. Convention in Los Angeles

CORROSION COSTS YOU MORE THAN WROUGHT IRON

WROUGHT IRON

TUBULAR AND HOT ROLLED PRODUCTS

ELECTRIC FURNACE QUALITY STEEL PRODUCTS

ARCHITECTURAL RECORD

May 1956 Vol. 119 No. 5

Copyright 1956 by F. W. Dodge Corporation, with all rights reserved. ARCHITECTURAL RECORD (combined with AMERICAN ARCHITECT and ARCHITECTURE) is published monthly, except May 1956 when semi-monthly, by F. W. Dodge Corporation, 10 Ferry Street, Concord, New Hampshire. **Editorial and executive offices: 119 West 40th Street, New York 18, New York.** Western editorial office, 2877 Shasta Road, Berkeley 8, California.

STAFF OF ARCHITECTURAL RECORD

H. Judd Payne, *Publishing Director;* **Robert F. Marshall,** *General Manager;* **John Knox Shear, A.I.A.,** *Editor-in-Chief;* **Marshall T. Ginn,** *Circulation Manager;* **Emerson Goble,** *Managing Editor;* **Frank G. Lopez, A.I.A.,** *Senior Editor;* **James S. Hornbeck, A.I.A.,** *Senior Associate Editor;* **Elisabeth Kendall Thompson,** *Senior Associate Editor and Western Section Editor (Berkeley, California, Office);* **Robert E. Fischer,** *Associate Editor (Engineering),* **Florence A. van Wyck,** *Associate Editor;* **Jeanne M. Davern,** *Associate Editor (News);* **Daniel M. Kelley,** *Associate Editor (Engineering Assistant);* **Herbert L. Smith, Jr.,** *Associate Editor;* **Ernest Mickel, Dan Street** *(Washington),* **John Caulfield Smith, M.R.A.I.C.** *(Canada), Contributing Editors;* **Marjorie Blake, Grace M. Anderson,** *Assistant Editors;* **Helen E. Cook,** *Editorial Assistant (Production);* **Ruth Watson Martin,** *Editorial Assistant;* **Eugene H. Hawley,** *Design Director;* **Douglas R. Steinbauer,** *Design;* **Sigman-Ward,** *Drafting Consultant;* **Thomas S. Holden,** *Industry Relations Consultant;* **Clyde Shute,** *Statistical Consultant;* **George Cline Smith,** *Economics Consultant;* **Clifford Dunnells, Jr.,** *Field Research Consultant;* **Daniel J. Howe, Jr.,** *Public Relations Consultant.*

TABLE OF CONTENTS

The Record Reports

Perspectives	9
Buildings in the News	10
Art and Hardware: A Program to Fuse the Two	16
Reviewing the Record — California: The Emergence of a Tradition	16B
Meetings and Miscellany	21
Architectural League of New York's 1956 Gold Medal Exhibition	28
A Washington Report. HHFA'S International Housing Service. *By Ernest Mickel*	32
News from Canada. *By John Caulfield Smith*	36
Washington Topics. *By Ernest Mickel*	48
Construction Cost Indexes	56
Required Reading	60
Calendar and Office Notes	338
Views of Current Periodicals	352
Current Trends in Construction	396

COVER: General Motors Technical Center, Warren, Mich.; Eero Saarinen & Assoc., Architects. © Ezra Stoller photo

A Tour of the GM Technical Center Interiors

First showing of the more striking interiors, many in color, in General Motors' architecturally famous research group. General Motors Technical Center, Warren, Mich.; Eero Saarinen & Assoc., Architects; Smith, Hinchman & Grylls, Archt.-Engr. 151

Architecture of the Los Angeles Region

The ready acceptance of ideas in the southern California region has led to an architectural range from "a carnival of oddities" to notable achievements by some famous architects, old and young.

An illustrated article *by Arthur B. Gallion,* Dean, School of Architecture, University of Southern California 159

Two California Houses

House for Mr. and Mrs. Eugene Weston, III, La Canada, Calif.; Eugene Weston, III, Designer 167

House for Dr. and Mrs. Max Goodman, San Bernardino, Calif.; Richard J. Neutra, Architect 171

An Indoor Sports Pavilion for Stanford

Stanford University Sports Pavilion, Stanford, Calif.; John Carl Warnecke, Architect 175

Campus-Plan Church

First Unit of a Four Part Master Plan Now Finished Fellowship Hall, Trinity Church — Presbyterian, Natick, Mass.; The Architects Collaborative, Architects 180

Continued on next page ▶

ARCHITECTURAL RECORD

Continued from page 5

Small Banks An Active Type

Liberty Bank of Honolulu in the Foodland Supermarket, Beretania-Kalakaua; Vladimir Ossipoff, Architect; Architect; Wayne F. Owens, Assoc. 183

Equitable Security Trust Co., Newark, Del.; Victorine & Samuel Homsey, Architects 184

First Federal Savings & Loan Association of Catawba County, Conover, N. C.; Clemmer & Horton, Architects 186

Chautauqua National Bank, Jamestown, N. Y.; Beck and Tinkham, Architects & Engineers 188

Manufacturers National Bank, Detroit, Mich.; Louis G. Redstone & Allen G. Agree, Associated Architects 190

Planning for People

The rapidly increasing percentage of older people presents a serious planning problem, not only for aged citizens but for all age groups, who need contacts with the grandparents but who cannot assume their daily care.

For Older People — Not Segregation but Integration. An article *by Lewis Mumford* 191

Building Types Study Number 234 — Buildings for the Aging

Architectural Competition Announcement 195

"Some Current Attempts at Better Buildings for the Aging." An article *by Geneva Mathiasen* 196

"Medical Facilities for the Aging." An article *by Frederic D. Zeman*, M.D., F.A.C.P. 202

"Improved Homes for the Aged." An article *by Ollie A. Randall* 208

The New Program and the Architect. An article *by Walter K. Vivrett* 212

Superintendents' Comments on Planning — Administrators Stress Growing Medical Needs: Letters to ARCHITECTURAL RECORD 218

Planning the Nursing Home — U. S. Department of Health, Education and Welfare Public Health Service, Division of Hospital and Medical Facilities 222

Architectural Engineering

High Velocity Air Conditioning: Its effect on building design. *By C. Milton Wilson*, Anemostat Corp. of America 227

Closed-Circuit Television. *By Skipwith W. Athey*, General Precision Laboratory Inc. 232

Technical Roundup 235

Product Reports 237

Literature 238

Time-Saver Standards: Design of Foundation Drains — I, II & III. *By Philip P. Page, Jr.* 241

Index to Advertising 398

OFFICERS OF THE F. W. DODGE CORPORATION

James McV. Breed, *Chairman of the Board;* **Paul Abbott and Thomas S. Holden:** *Vice Chairmen of the Board;* **Howard Barringer,** *President;* **Irving W. Hadsell, Chauncey L. Williams:** *Executive Vice Presidents;* **Howard M. Thompson,** *Vice President and Treasurer;* **Julius T. Little, Robert F. Marshall, T. Oliver Morgan, O. O. Paulsell, H. Judd Payne, George Cline Smith:** *Vice Presidents;* **Carl S. Bennett, Clinton C. Bennett, Ralph M. Hairston, Roy J. Hard, Richard H. Ray, John M. Williams:** *Regional Vice Presidents;* **Edwin H. Freed,** *Assistant Vice President and Comptroller;* **Walter F. DeSaix, Clifford G. Dunnells, Jr., Clyde Chute, Marc Wayne:** *Assistant Vice Presidents;* **Sanford D. Stockton, Jr.,** *Secretary;* **William C. Breed, Jr., George W. Morgan, Jr.:** *Assistant Secretaries;* **Irving B. Satin,** *Assistant Treasurer.*

OTHER F. W. DODGE SERVICES

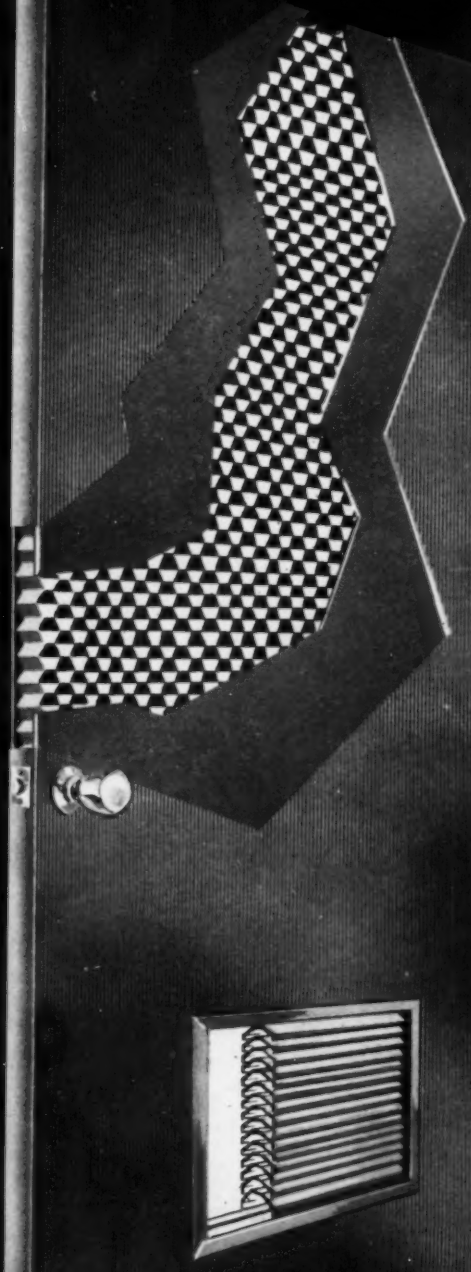
Dodge Reports — Dodge Statistical Research Services — Sweet's Catalog Services — Dodge Books — Dodge Mailing Service — Chicago Construction News — Daily Pacific Builder — Denver Daily Journal — Real Estate Record & Builders' Guide.

Members of Audit Bureau of Circulations and Associated Business Publications. Architectural Record is indexed in Art Index, Industrial Arts Index and Engineering Index.

Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage.

Subscription prices: Published monthly except May 1956 when semi-monthly. U. S., U. S. Possessions and Canada: $5.50 per year; other Western Hemisphere countries, Philippines and Spain, to those who by title are architects and engineers, $6.50 per year. Single copy price except Mid-May 1956 issue $2.00; Mid-May 1956 issue $2.95. Beyond Western Hemisphere, excluding Philippines and Spain, to those who by title are architects and engineers, $6.50 per year for 12 monthly issues not including Mid-May 1956 issue. Subscriptions from all others outside U. S., U. S. Possessions and Canada for 12 monthly issues, not including Mid-May issue, $20 per year. Change of address: subscribers are requested to furnish both old and new addresses, sending if possible stencil impression from magazine wrapper; allow four weeks for change.

FOR DOORS THAT WEAR AND WEAR AND WEAR



specify

PANELFAB

with confidence!

STRIKINGLY HANDSOME, EXTREMELY VERSATILE
for commercial, institutional and residential application

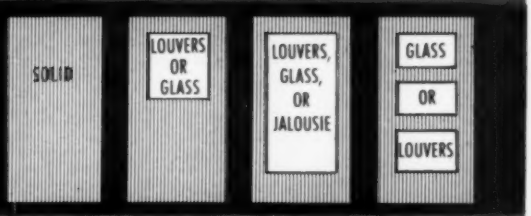
EXTRAORDINARY STRENGTH AND RIGIDITY
in relation to weight

EXCEPTIONAL IMPACT RESISTANCE
for years of unmarred beauty

CUSTOM ENGINEERED FOR PERMANENCE
practically indestructible under normal service conditions

PANELFAB DOORS are formed upon a resin impregnated Kraft honeycomb core extending to the full dimensions of a *one-piece* extruded .125" thickness aluminum perimeter edge. Core and edge are permanently bonded between .032" thickness vertical ribbed sheet aluminum facings laminated to a ⅛" hardboard back-up material, with the edge roll-interlocked to the facings. Doors reinforced for any type hardware.

The result is a positively sealed, dimensionably stable, light weight door that is absolutely impervious to rot, vermin, or the most adverse weather conditions. Available in mill finish or anodized.



Distributors in principal cities
For detailed information to aid in your door selection and specifications, please write to...

PANELFAB PRODUCTS, INC.
2000 N.E. 146th Street
at Biscayne Boulevard
North Miami, Florida
Phone Miami 816-5646

PANELFAB®

See 1956 Sweet's File 16A Pan

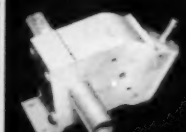
At last - a truly Monumental awning window

designed to meet your most rigid requirements

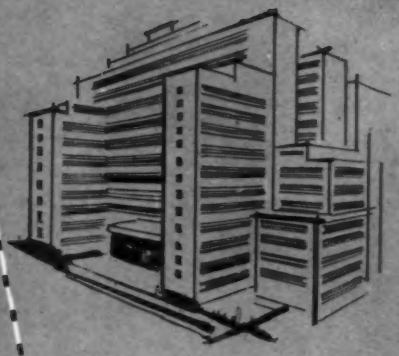
WARE

MONUMENTAL AWNING WINDOW

Combines classic beauty and rugged strength with the advantages of maintenance-free Aluminum.



Dimensions of Heavy Compound Operator are 5¼" x 3" x 2"



FEATURES OF DISTINCTION

- **PERFECTED WEATHERING** — Koroseal weatherstripping imbedded in extruded channel, perfect seating of ventilators with wide overlap in frame contact.
- **HEAVY EXTRUDED SECTIONS** — 1⅝" ventilator depth. Minimum thickness of all structural members ⅛".
- **ALL MOVING PARTS** bushed in self-lubricating nylon. All linkage tested for maximum load conditions.
- **EASE OF OPERATION** — Perfect balance and gear ratio permits finger tip control.
- **STRIP PROOF HEAVY COMPOUND OPERATOR** concealed in sill, synchronized distribution of load, unparalleled load safety factor for aluminum awning windows.
- **RIGID FRICTION FREE VENTILATORS** — Head of ventilator operates in individual track attached to frame jamb.
- **HARDWARE**—Solid white bronze attractively designed tilted crank for operating vents. Solid white bronze cam lock and latch for hopper vents.

Aluminum **WARE** *Windows*

MONUMENTAL WINDOW DIVISION

QUALITY APPROVED A-A 2

WARE LABORATORIES, INC.
3700 N.W. 25th STREET,
MIAMI, FLORIDA

Write for specifications and detail drawings. Our engineering staff is available for your special window needs. Write Dept. R-5

PERSPECTIVES

IN THE CAUSE OF ARCHITECTURE many architects daily endure many things, including contumely, but how mundane, how finite the accusations, how temporal the accuser! Wimberly and Cook of Honolulu report receiving a protest (from an engineer, by the way) on their contemporary design for a site near Honolulu's existing Civic Center which displayed none of these limitations. "If," the letter intoned, "you erect a Hawaiian Trust Building at King and Richards that is out of harmony with the Iolani Palace, the YWCA, the Federal Building and the Armed Services YMCA, *you will be haunted by 8000 ghosts for 8000 years.*"

A MATTER OF FACT: Architect Julian Clarence Levi was telling last month about the time Auguste Perret was taken along on an Architectural League outing that started with a picnic lunch on the lawn of Philip Johnson's famous glass house in New Canaan. Afterwards, somebody asked the French virtuoso of reinforced concrete if he would not like to see the house. "Thank you," he replied, "I have seen it."

FISHBOWLS AND BATHTUBS: Fair warning to those who may be tempted to wonder aloud how employes will like working in the six-story "bathtub" below the plaza of Chase-Manhattan's great new project for lower Manhattan (see page 10) — decriers of the "fishbowl" as a place to work did not come very close to guessing how employes would react to Manufacturer's Trust's glass bank uptown. According to president Horace C. Flanigan, the main personnel problem created by the new bank is that of screening four times as many applications to work there as there are jobs. (The craftiest approach to employes buttonholed at random produces no different impression.) As for how the Skidmore, Owings & Merrill design (which by now has won almost as many awards as Lever House) works as a building for business, Mr. Flanigan deposes and says that in the first year in the new building (diagonally across the street from the old) twice as many new accounts were opened as ever were opened in *any* Manufacturer's Trust branch in a single year. It ought to be added that public interest in the building is not only welcomed but skillfully encouraged: anybody interested can tour the building any day in the week, and the groups are accompanied by carefully trained guides who really know their subject. Final statistic: more than 5000 visitors took the guided tours during that first year.

ANNUAL REPORT (somewhat belated): Architecture gets no more shrift from the 1956 edition of *The World Almanac* than it did last year (AR, Feb. 1955). In fact, it's still not even listed in the index ("Law" is listed with two subheadings and "Medicine" with 23). The heading "Architects" leads, as last year, to "Associations" (the architectural ones are still Alpha Rho Chi, Scarab, the American Institute of Architects, the New York Society of Architects and the Architectural League of New York); "Awards" (this time noting the Architectural League of New York medals as well as the A.I.A. Gold Medal, craftsmanship Medal and Fine Arts Medal — and listing the winners of the 1955 awards); and "Noted" — i.e., the selfsame list of 25 American architects (none living). Being headed simply "American Architects," it might lead the all-too-unsuspecting reader to suppose the genus to be extinct, although it is true that the Almanac's "Noted Personalities" section appears wedded to necrology in all categories save two, "Operas by American Composers" (which admits both the quick and the dead), and "Actors, Actresses, Musicians and Singers," which appears to be entirely for the quick. Alas poor architects!

AS FOR THE FUTURE, among 5078 of America's brightest youngsters — semi-finalists in the nationwide search for recipients of some $3 million in scholarships administered by the National Merit Scholarship Corporation — 40 boys and eight girls indicated they will aim for careers in architecture. This approximate one per cent of the total compares with 45 per cent who hope to become engineers or scientists. Other preferences: teaching — 36 per cent of the girls; medicine and other health fields — 10 per cent of both boys and girls; business — 8 per cent of both boys and girls; law — 8 per cent of the boys, 5 per cent of the girls; arts and letters — 12 per cent of the girls, 4 per cent of the boys; religion and social service — 3 per cent of the boys and 4 per cent of the girls.

FAREWELL TO A SYMBOL: Announcement that the American Battle Monuments Commission had approved a Washington, D. C., site for a memorial to General Pershing led that city's *Evening Star* to note, perhaps wistfully, that "it has been pointed out that the World War I commander was probably the last military leader who could appropriately be portrayed in a monument on horseback." And in the same story to quote the Commission secretary (and soon-to-be A.I.A. honorary member), Brig.-Gen. Thomas North, as saying "that it is felt the day of the man on horseback memorial has passed." One possibility under discussion for the Pershing memorial General North said, would combine a figure of Pershing (a cavalry officer unhorsed!) with a simple memorial containing maps in some durable medium relating the accomplishments of Pershing's troops (a technique which is being used in the World War II memorials developed under the aegis of the Commission). "Many still recall," said the *Star*'s account, "the postwar parade when General Pershing, mounted on a white horse, led the returning First Division down Pennsylvania Avenue." What, no jeep?

SPACE FOR PEOPLE: SUPERBLOCK SCHEME FOR OFFICE PROJECT CREATES A PUBLIC PLAZA

A $15,000 plastic and aluminum scale model of the projected new head office building of the Chase Manhattan Bank and its Manhattan environs for some ten square blocks around was on display last month in the main banking room at 40 Wall Street; and the main features of the scheme announced earlier (AR, February 1956, page 10) had been made public.

The open plaza to occupy some 70 per cent of the two and a half-acre site — or 98,000 sq ft, an area a third again as large, for instance, as New York's Gramercy Park — in the heart of the world-famous congestion of the financial district is, of course, the most stunning feature of the Skidmore, Owings and Merrill design. But it is not unremarkable, either, to hear that the bank will conduct most of its routine business with the public underground, in five floors *below* the plaza, or that the building to be erected on the northern portion of the site will rise 810 ft — 60 stories — without setbacks, providing on each floor from plaza to roof a uniform open space of more than 30,000 sq ft. Also to be noted is the fact that treatment of the two-block site (bounded by Liberty, Nassau, Pine and William streets) as a "superblock" could not have been considered without the cooperation of sympathetic city officials, requiring as it does the closing to traffic of one block of Cedar Street.

Chase Manhattan president J. Stewart Baker stressed that the plan "represents a highly advantageous use of the bank's property from an economic viewpoint. The conventional approach of a setback building on one of the blocks in the site would result, considering the bank's needs, in less efficient space, a more costly type of construction and little or no room for expansion. In short, the loss of economic space involved in demolition for the plaza is compensated for by the space gained in the design of the building made possible by the plaza."

The tower will be a rectangular shaft 281 by 107 ft, with metal-sheathed exterior columns carrying "a major portion" of the building's weight. Thus each floor will have an unbroken sweep of usable floor space the full length of the building from the outside walls to the solid central interior core which carries elevators and other services. Bank officials believe that no other office building in the world has such large areas (as 30,000 sq ft) available on its upper floors. Four service floors will house air conditioning and heating equipment.

For the underground facilities, the entire site will be excavated to a depth of 80 ft and walled in to form what has been described by Chase Manhattan executive vice president David Rockefeller as a huge "bathtub" — the bottom of the excavation will be 60 ft below the water table.

The main banking floor, with an area of 94,000 sq ft, will be directly *beneath* the plaza, which will take advantage of the eastward slope of the site to be at street level on the western (Nassau Street) side and well above it on the eastern (William Street) side. Thus there will be direct access to the banking floor from William Street (photo at left below). Customers will look out from this floor to a sunken pool in the center of the plaza.

Below the banking floor will be a floor devoted to a cafeteria and recreational facilities for the bank's 9000 employes, now scattered through nine buildings. The next two levels down will be occupied by two of the bank's largest departments, the check handling and stock transfer operations.

Cost of the project is estimated at $75 million. Of a total of 1,700,000 sq ft of usable floor space to be provided, a million will be occupied by the bank and 700,000 rented. Completion of the building is scheduled in three years, of the plaza in five — most of the buildings now on the plaza site cannot be vacated till space in the new building is available.

Model by Theodore Conrad

SPACE FOR PEOPLE: SUPERBLOCK PLAN EXTENDS CAMPUS OF MIDCITY UNIVERSITY

"A little vision of a future big city" is architect Wallace K. Harrison's description of the $17 million new East Campus development for Columbia University planned by Harrison and Abramovitz for a superblock bounded by Morningside Drive, Amsterdam Avenue and 116th and 118th streets across Amsterdam Avenue from the University's present campus in uptown Manhattan.

The new project, for which a fund-raising campaign is under way, will cover all but the southwest quadrant of the superblock with a one-story complex of classrooms, kitchen, dining, recreation and parking space (overall view at left below), above which will rise three large new buildings — Faculty Office Building (1), School of Law (2), and Graduate Residence Hall (3). A landscaped deck or footbridge across Amsterdam Avenue — visible in center of (2) — will connect the new campus with the old at the same level as Low Memorial Library (visible at extreme left in large photo below). The bridge, to be 100 ft wide and 200 ft long, would span almost the entire distance from 116th street to 117th street.

To make possible the University's development of the new area, the City of New York has agreed to close the section of West 117th Street between Amsterdam Avenue and Morningside Drive and convey title of the land to Columbia. As part of the arrangement, Columbia will turn over to the city a strip of land approximately 20 ft wide on the southern side of West 118th Street between Amsterdam Avenue and Morningside Drive to be used to widen that street.

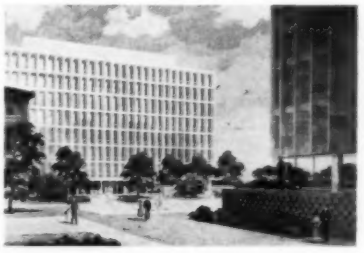
Another preliminary to commencement of the new campus will be demolition of 25 buildings now on the site, including seven apartment buildings, four of them owned by the University. The president's house, the Faculty Club, one dormitory and Casa Italiana, the center of Italian studies, will remain.

As for the new buildings, the School of Law and Library will be a nine-story structure with library space for 600,000 volumes, as well as classrooms and offices — to go up on the southwest quadrant of the superblock; the Faculty Office Building will be a nine-story building, to accommodate many faculty members who now use as office space rooms elsewhere on the campus that can be converted to classrooms — to be put up in the northwest quadrant of the superblock, with its own offstreet parking area for students and faculty; the Graduate Residence Hall, a 15-story, 742-room dormitory to house students of the Schools of Business and Engineering as well as those of the new School of Law Building — to be built in the northeast quadrant of the superblock.

At a press conference announcing the project, Columbia's president, Dr. Grayson Kirk, noted that "the ingenious architectural development of the superblock will appreciably enlarge the total usable land areas of the Morningside campus." Expressing appreciation for the cooperation of city officials which is making the superblock development possible, Dr. Kirk added: "It is also our hope and belief that this superblock, with its three striking and well-spaced buildings, will be a unique adornment to the city as a whole."

New York City Construction Coordinator Robert Moses, also present when the plans were announced, called the project "another one of those important and complex neighborhood improvements," developed to the planning stage "without friction" and another example of "New York growing, changing, being rebuilt."

Mr. Harrison, making the "little vision of a future city" comment, said the proposal to build the new campus above the street level is an example of how cities themselves might solve their growing demands for space, and felt city officials should be commended for their "courage" in approving the plans.



1

2

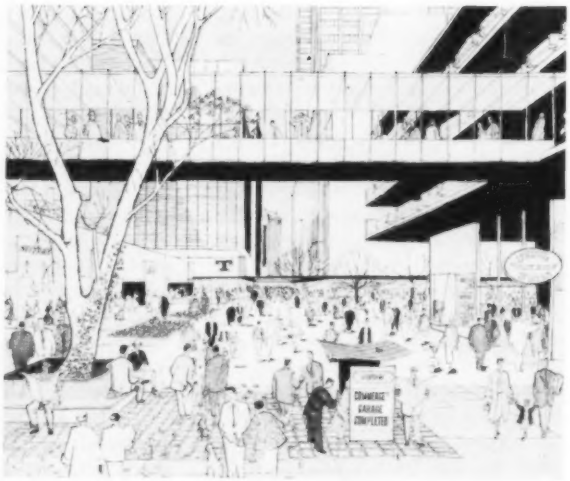
3

(Continued on page 12)

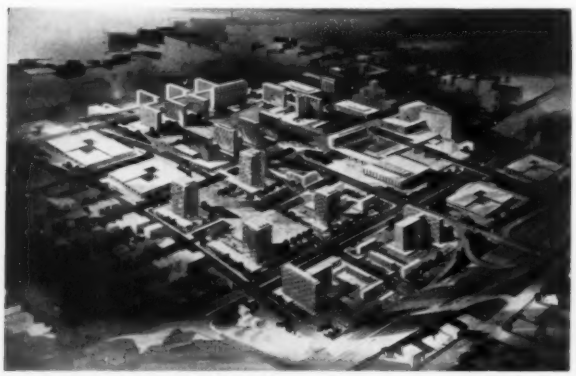
BUILDINGS IN THE NEWS

(Continued from page 11)

SPACE FOR PEOPLE: A CITY REPLANNED, AN AREA REDEVELOPED



FORT WORTH TOMORROW: A sweeping but minutely studied proposal for redevelopment of Fort Worth developed by architect Victor Gruen for the Greater Fort Worth Planning Committee would, in effect, turn the whole downtown area over to the pedestrian. Based on exhaustive research initially sparked by concern of Texas Electric Company for the future of its Fort Worth investment, the chief recommendations of the plan are for: (1) a central business district of landscaped plazas and walls restricted almost entirely to pedestrians, though it would have provisions for ambulances and firetrucks and battery-powered shuttle cars; (2) underground freight delivery facilities in the business district; (3) a belt-line highway to receive traffic from the city's freeways, and shunt it into "strategically placed" garages and air, bus and rail terminals; and (4) six multistory garages having "deep penetration" into the business district to keep walking distances to a minimum. The proposal, which has not yet been adopted by the city, envisages completion by 1970



BUNKER HILL, LOS ANGELES: Another proposal favoring the pedestrian has been put forth by planners Pereira & Luckman, in association with Welton Becket & Associates and the Donald R. Warren Company. Their plan for the redevelopment of the Bunker Hill Area in Los Angeles calls for the division of the hill into three sections — one for housing, one for business and one for a cultural center, to contain a civic auditorium, a trade exposition building and a music hall. Each is to be built around a plaza and connected to the others by street passes for pedestrians. A system of depressed streets would also be covered with foot bridges — at the top of the hill about 80 per cent of the street area would be covered. At an estimated total cost of $150 million, the city will clear the land and private developers will build in compliance with the master plan. Renderings above show the overall plan (at left), and the civic trade plaza (at right)

(More news on page 16)

Announcing

THE PUBLICATION OF

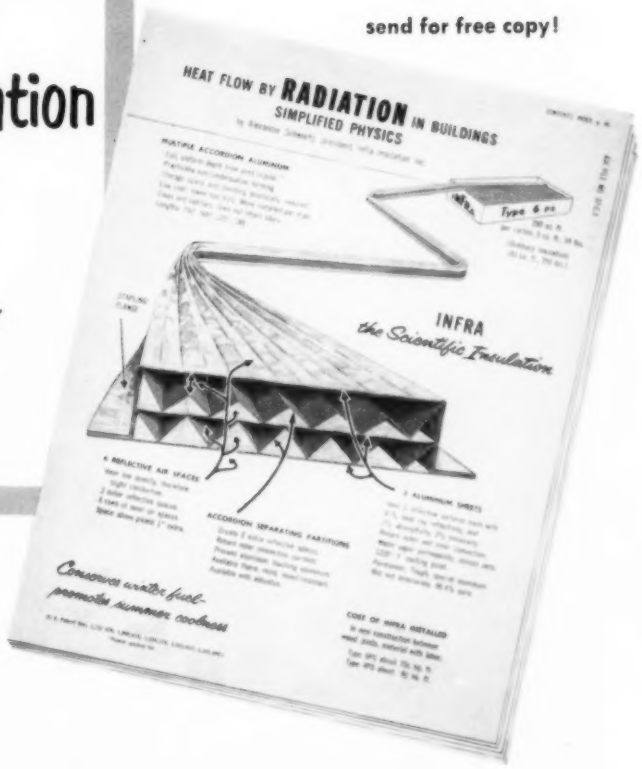
"Heat Flow by Radiation in Buildings

SIMPLIFIED PHYSICS"

by Alexander Schwartz

Member, American Society Heating & Air-Conditioning Engineers
President, Infra Insulation, Inc.

send for free copy!



A discussion of the newest theories and practises, with simple experiments and explanations of the fundamental laws of physics involved, in the field of heat flow, vapor flow, and condensation.

Here is a manual invaluable to the architect, engineer, builder, contractor, dealer, and also the professor of technical subjects and students. Of scientific exactitude, yet so simply written and clearly presented, even the layman can read and profit from it. Its scope is broad, ranging from the laws of Nature which underlie the subject, to illustrated techniques for installing insulation under many normal and unusual conditions.

In this one, handy 48-page brochure, are assembled in condensed, easy-to-read language, facts, figures, scientific theories, and reports of experiments obtainable otherwise only through years of intensive study and the consultation of hundreds of books, articles, reprints and other publications. It contains current material which is the fruit of the author's vast experience and contact with scientists, engineers, architects, builders, mechanics, home-owners, directors of research, and government officials. It is liberally illustrated with drawings, photographs, charts, diagrams, and tables.

ABOUT THE AUTHOR

Mr. Schwartz, a well-known figure on the lecture platform before professional societies and in technological institutes, has a rare gift for presenting his material in an interesting way that makes it easily grasped —and remembered. He is the author of "Simplified Physics of Vapor and Thermal Insulation," hundreds of thousands of copies of which have been used throughout the years by the building industry, and as a text by scores of universities, colleges, schools of architecture and engineering.

For a free copy of "Heat Flow by Radiation in Buildings," send the coupon.

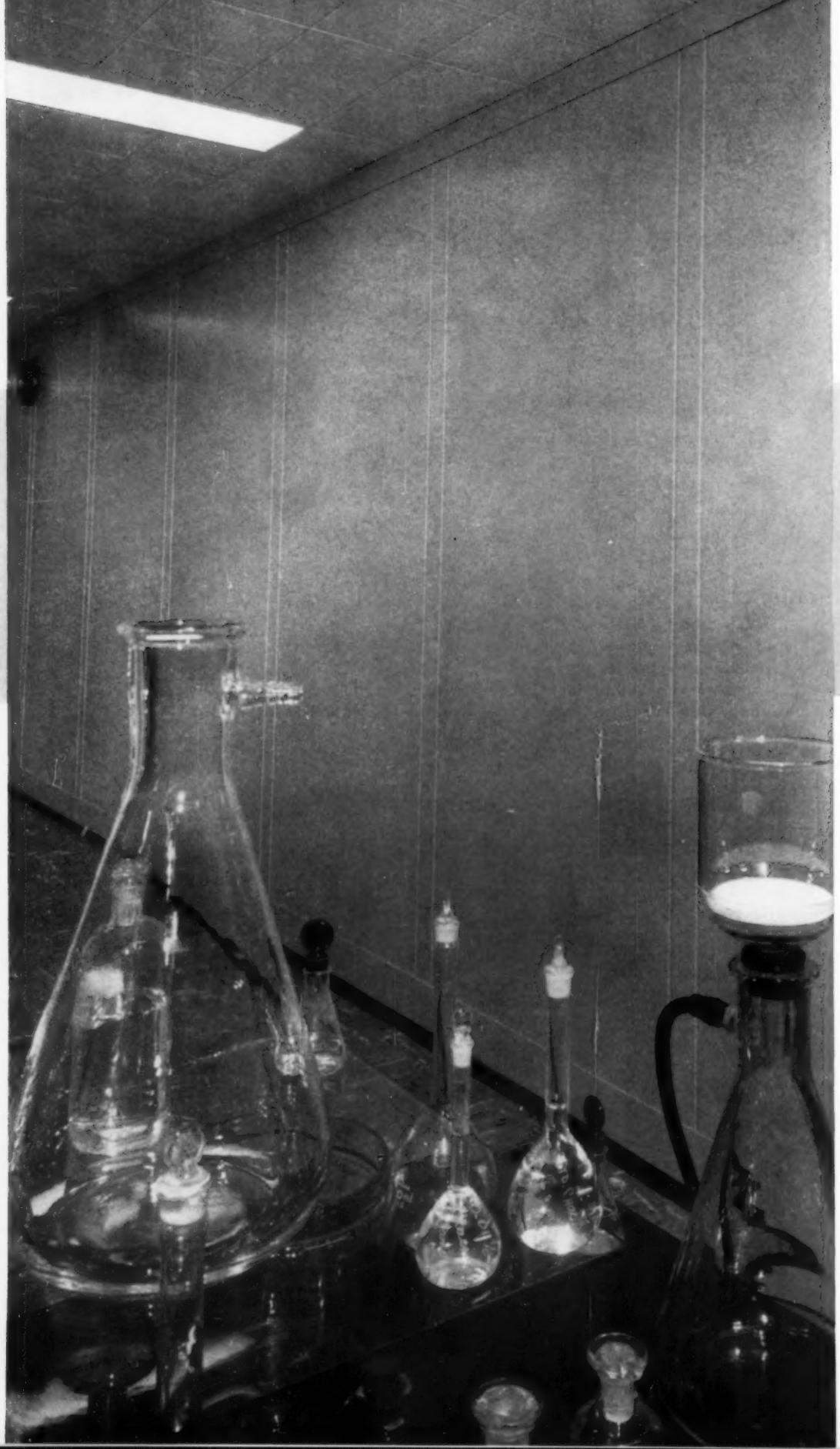
Infra Insulation, Inc.,
525 Bway., N. Y. C., Dept. R-5

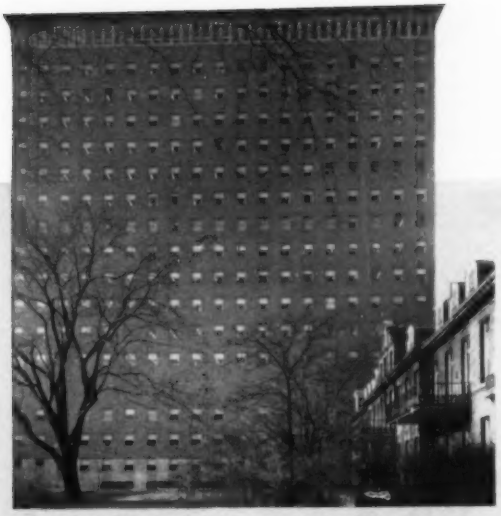
Please send "Heat Flow by Radiation."

NAME

FIRM

ADDRESS



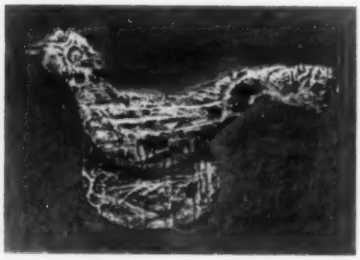


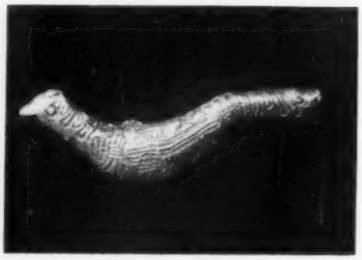
HENRY FORD CLINIC, DETROIT, MICHIGAN
Voorhees, Walker, Smith and Smith, Architects

Mills Movable Partitions give space *flexibility*, make it more *usable* in any building interior. They can be taken down and relocated quickly and easily to fit new layouts, whenever changes in space requirements occur. Fully insulated and soundproofed, they combine mobility with stability and distinctive appearance. More than eight miles of Mills Walls keep the interiors of the New Henry Ford Hospital Clinic Building constantly adaptable to changing conditions. Write for our informative new catalog. The Mills Company, 901 Wayside Road, Cleveland 10, Ohio.

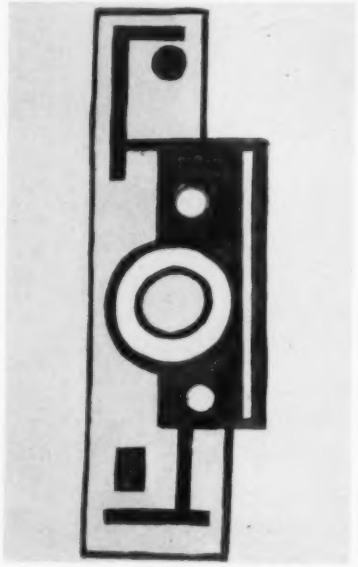
(Continued from page 12)

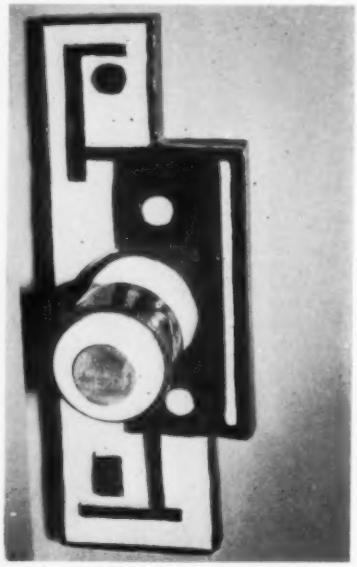
ART AND HARDWARE: A PROGRAM TO FUSE THE TWO





Mirko's drawing (left) for the bird figure executed in silverized antique bronze (right)





Fernand Leger's drawing (left) for the ceramic knob and escutcheon shown at right

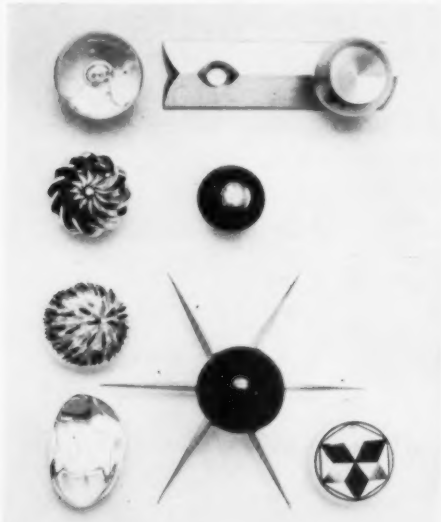
Remembering the doorknob, "forgotten Cinderella of decoration," Yale & Towne Manufacturing Company, makers of, among other things, doorknobs, has lately set up a new styling department, under the direction of Van Day Truex, "to overcome the conventionality of machine style." The styling department, in addition to contributing some new designs of its own, commissioned artists both here and abroad, as well as Corning Glass and Venini of Venice, to cooperate in developing a fresh approach to the problem. What they achieved ranged from the fantastical creations of the Italians Mirko, Andrea Spadini (see Moon, above) and Paolo De Poli to the simple handle by architect Philip Johnson of the U. S.

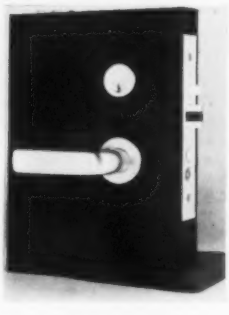
Besides the artists whose work is shown on this page, designs were also commissioned from Jacques Lipschitz, Isamu Noguchi, Abraham Lassaw and Theodore Roszak.

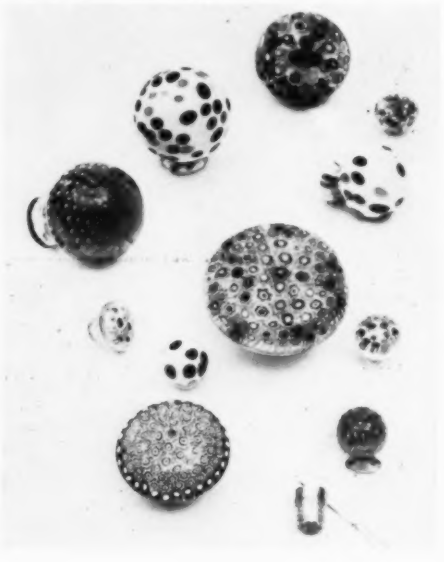
Pleased with the results of this effort, Yale & Towne are now thinking of the possibility of carrying out a similar program with architect participants, and perhaps following that one with a sculptor's program.

The designs will be on exhibit in New York from May 1 to 5 at the Wildenstein Gallery, may travel later.

Left: designs from Yale & Towne's styling department in marble, brass, crystal and ceramic; center, top: blue enameled door pull by Paolo De Poli; center, bottom: stainless steel lever handle by Philip Johnson; right: colored glass knobs by Venini of Venice







Another sensational Plextone *first*..

A Full Year Guarantee

on multicolored textured paint

Plextone Standard Multicolors Include These "COLOR LEADERS"

Sky Blue WA 657 (House & Garden Color)

Tandem Ivory WA-203

Citron WA-659 (House & Garden Color)

Alfi Tan WA-653

Boerum Ivory WA-176

Williams Green WA-106

Alouette White WA-767

Fern WA-658 (House & Garden Color)

Carnation WA-656 (House & Garden Color)

Ashley White WA-519 (House & Garden Color)

The most startling news since Plextone . . . A full year guarantee of this amazing color-flecked textured finish on walls! Only Plextone can give such a guarantee because of its unsurpassed durability. Plextone consists of two or more colors applied by a single spray application, from one container, forming a multicolor pattern of outstanding beauty and sales appeal. Be among the first to offer Plextone guaranteed painted walls.

Write for complete information and the new Plextone color palette.

PLEXTONE®

WORLD'S LARGEST PRODUCER OF MULTICOLORED PAINTS

MAAS & WALDSTEIN CO.
Architectural Division
2129 McCarter Highway
Newark 4, New Jersey

Gentlemen: Please rush free new PLEXTONE color palette and application information.

our 80th year

Name

Title (or occupation)

Company

Address

City Zone State

MAAS & WALDSTEIN CO.

2121 McCARTER HIGHWAY, NEWARK 4, NEW JERSEY

MIDWEST DIVISION: *1658 Carroll Avenue, Chicago 12, Illinois*

PACIFIC COAST DIV.: *Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Calif.*

Architectural Record, December 1908

CALIFORNIA: THE EMERGENCE OF A TRADITION

"The Californians love their country without affectation and without effort; they possess a greater potency of successful achievements in the arts than do the inhabitants of any other single section of the Union; and, best of all, they have shown an unusual power of cooperating either formally or informally to accomplish some purpose which is recognized to be good. They show an active and adaptable intelligence, that is, without being arbitrary and perverse in its exercise, and they may well reach some common sensible understanding about the sort of country house best adapted to their countryside." So said Herbert Croly, one of the RECORD's contributing editors, in December 1913.

The historical pattern of Californian architecture has shown an alternately shifting preference for the Mission-Spanish tradition and for the more indigenous California bungalow "style," a contest in which the bungalow has generally prevailed.

Montgomery Schuyler, who visited Los Angeles in 1908, was, like most visitors, impressed by the Mission architecture, and wrote in December of that year, "The chimes of San Gabriel [see cut above] are celebrated in story, and for all I know in song. And the bell gable deserves to be celebrated architecturally. Like the rest of the building to which it is attached it is the most straightforward fulfilment imaginable of the actual requirements of the case. Such a fulfilment may be ugly, but it cannot be vulgar."

It was not the Missions, however, which most charmed Schuyler — he liked them more for their "lesson of quietness and moderation" than for the "technical 'style' they offer for direct imitation." "[Los Angeles'] chief charm," Schuyler felt, "is that of nature. If art will only get out of the way, that is all that one can fairly ask of her on this enchanted shore. But, 'where every prospect pleases' it is also pleasant to find that 'man' is less 'vile' than could fairly be expected of him. And that you really do find round about Los Angeles."

Two years before Schuyler got to Los Angeles, A. C. David, writing in October 1906 about some of the work of the Greene brothers, managed to discuss the regional trend already emerging as a tradition in California architecture

(Continued on page 324)

Architectural Record, October 1906

Architectural Record, October 1914

In the line of development represented by the "California bungalow style" are the Hollister house in Hollywood (left) by pioneer architects Henry Mather Greene and Charles Sumner Greene, and the Frank Underhill house at Montecito (below, right), designed by the owner. The G. W. Wattles house, in Hollywood, was built, though rather freely, in the Spanish tradition; the architects were Myron Hunt and Elmer Grey

Architectural Record, October 1906

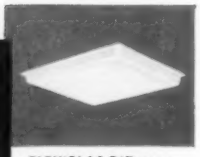
IN EVERY ARCHITECT'S OFFICE...

KENROYAL VINYL TILE SAMPLES

You'll want to be sure you have this sample box on hand for quick, easy reference to the full range of high taste colors available in the finest of vinyl tiles. KenRoyal, a luxurious homogeneous vinyl by Kentile, Inc., offers qualities demanded by your most discriminating clients . . . it is greaseproof, easy to maintain. Colors include the much wanted plain black and plain white as well as 6 matching colors in 1-inch wide Feature Strip for unlimited design scope. Available in Standard tile size: 9"x9". Thickness: Standard (.080") and ⅛". If you have not yet received a set of these 3"x3" Architect's Specification samples, please write on your letterhead to Kentile, Inc., 58 2nd Ave., Brooklyn 15, N. Y. We will be glad to rush them to you.

KENTILE, INC. America's largest manufacturer of resilient tile flooring

KENTILE Asphalt Tile, Carnival Kentile, Corktone Kentile • KENCORK, Cork tile for Floors and Walls • KENRUBBER, Rubber Tile • KENFLEX, Vinyl Asbestos Tile, Carnival Kenflex, Corktone Kenflex • KENFLOR Vinyl Tile, also available by-the-yard • KENROYAL Vinyl Tile • SPECIAL KENTILE, Greaseproof Asphalt Tile • THEMETILE, KENSERTS, Decorative Inserts • KENCOVE, vinyl wall base • KENBASE, wall base.



PLEXIGLAS Diffusers on lighting fixtures ... for high-level, uniform illumination with low surface brightness San Diego Public Library/architects: Johnson, Hatch and Wulff

Daylight Louver Panels formed from PLEXIGLAS ... for light transmission, daylight control and weather closure in one continuous surface Katherine Smith School, Houston, Texas/architect: Charles H. Kiefner

Dome Skylights formed from all-weather PLEXIGLAS ... for efficient, balanced daylighting Norman, Oklahoma, High School/architects: Caudill, Rowlett, Scott & Assoc., and Perkins & Will

Plexiglas

THE ARCHITECTURAL PLASTIC

...for skylights...lighting...daylight-control glazing...signs

Here are the basic reasons why PLEXIGLAS® acrylic plastic is being used so widely in the building industry:

... PLEXIGLAS can be formed economically to almost any shape
... it is light in weight and highly resistant to breakage
... it is an outdoor plastic with time-proved resistance to weather
... PLEXIGLAS transmits and diffuses light with highest efficiency
... in transparent form, it has optical-grade clarity

Building products and custom installations based on the use of PLEXIGLAS are currently satisfying the most rigid requirements of architects and their clients. We will be glad to send you the names of sources of supply for products that incorporate PLEXIGLAS, and the names of sign companies experienced in its use.

Internally-lighted Signs of PLEXIGLAS ... for fresh, attractive identification with lasting beauty and long-range legibility Gimbels-Cheltenham Store, Philadelphia/architects: Welton Beckett & Associates and Howell Lewis Shay

Chemicals for Industry

ROHM & HAAS COMPANY

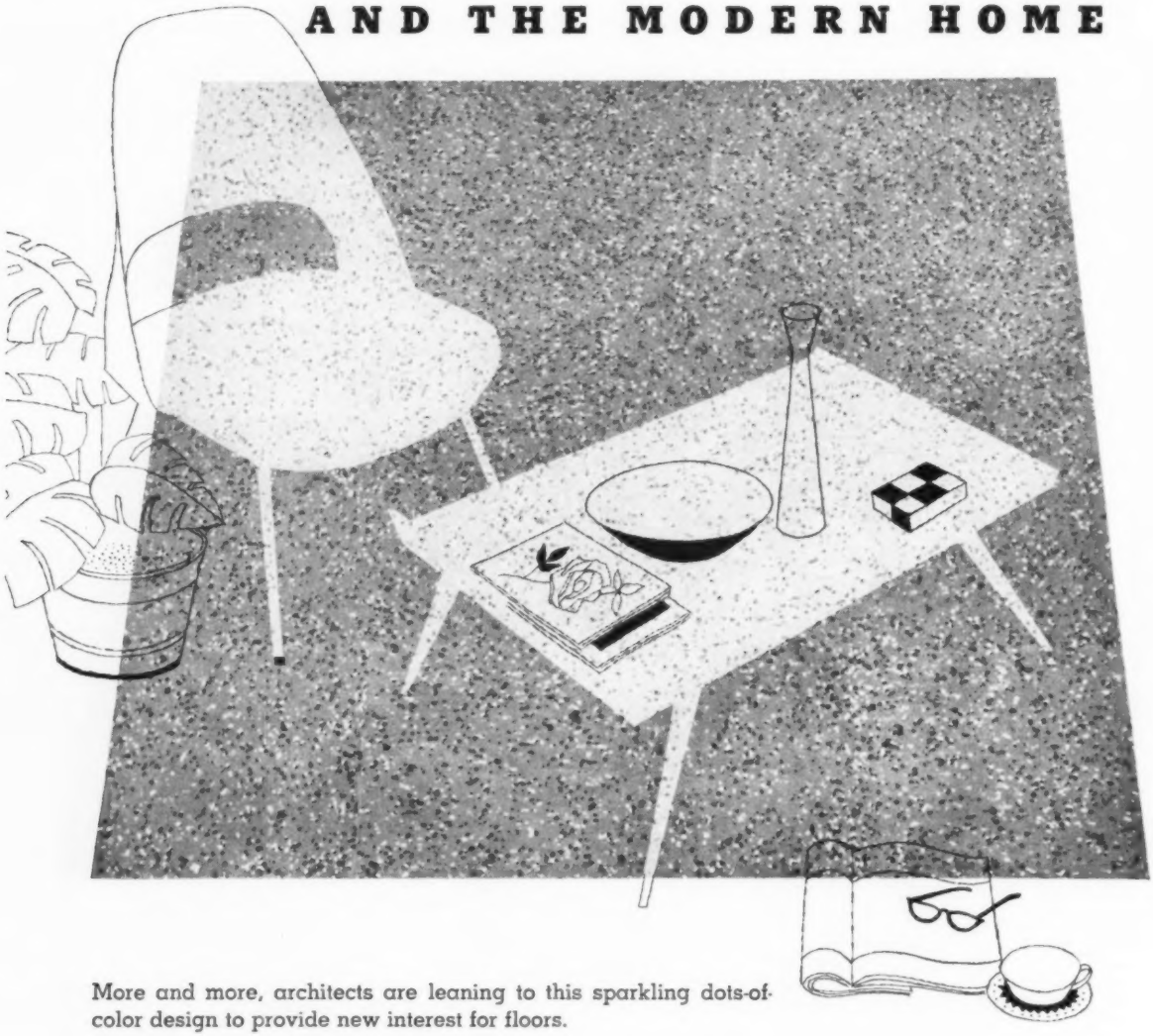
WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

Canadian Distributer: *Crystal Glass & Plastics, Ltd., 130 Queen's Quay at Jarvis Street, Toronto, Ontario, Canada.*

Moultile JUBILEE TILE FLOORING

AND THE MODERN HOME



More and more, architects are leaning to this sparkling dots-of-color design to provide new interest for floors.

The reason: here is something eye-catching, different . . . yet is a fit companion to *every* style of architecture, *every* kind of decor.

It's not surprising, then, to note Jubilee in the specifications for virtually every room in the house . . . play, utility, living.*

Of particular importance is the fact that Jubilee wears as well as traditional asphalt tile. So here, too, is real economy . . . both in initial cost, installation and maintenance.

We would be happy to send you complete data.

*Nor, may we add, is it surprising to find Moultile Jubilee in virtually every type of *installation*.

Moultile
PRODUCTS
SINCE 1929

MOULTILE INCORPORATED • Joliet, Ill. • Long Beach, Calif. • Newburgh, N. Y.

The State of Construction

The first quarter of 1956 wound up with new records in every department: the $6.1 billion total of construction contracts awarded in the 37 eastern states as reported by F. W. Dodge Corporation set highs in all major categories — residential, nonresidential and heavy engineering. And the month of March alone produced the second highest total for any month in Dodge history. For details, page 396.

Belluschi and Burri Given A.I.A. Journalism Awards

For the third consecutive year, an article published in ARCHITECTURAL RECORD has won the year's major architectural journalism award: the First Award for "best article in a professional architectural magazine" in the Third Annual Architectural Journalism Competition sponsored by the American Institute of Architects. The article, which appeared in the December 1955 issue, was Pietro Belluschi's "The Meaning of Regionalism in Architecture." In the only other category of the competition open to architectural magazines, the First Award for the best photograph of an architectural subject published in a magazine goes to Magnum Inc.'s René Burri, of Zurich, Switzerland, for his photograph of Le Corbusier's chapel of Notre Dame du Haut, Ronchamp, France, published (page 167) in the October 1955 issue of ARCHITECTURAL RECORD. There were no other awards to architectural magazines. Winners receive prizes of $250 each as well as Certificates of Award. This was the second time the A.I.A. article award had gone to M.I.T.'s dean of architecture and planning for an article published in the RECORD — the first was for "The Spirit of the New Architecture" (October 1953). Of the six First Awards open to architectural magazines in the three years of the competition, RECORD publications have won five — in addition to those for the Belluschi articles and the Burri photograph, a First Award (last year) for Lewis Mumford's four-part article on Matthew Nowicki (June, July, August and September 1954) and a First Award (1954) for an Ezra Stoller photograph of Philip Johnson's Hodgson house (March 1953).

More A.I.A. Honors

In addition to the Gold Medal, Fine Arts Medal and Craftsmanship Medal (AR, April 1956, page 21) and the Edward C. Kemper Award (March 1956, page 21), the honors to be awarded at this year's A.I.A. national convention include: *Honorary Membership* — Thomas S. Holden, vice chairman, F. W. Dodge Corporation, New York; John Frederick Lewis, president, Pennsylvania Academy of the Fine Arts, Philadelphia; Brig.-Gen. Thomas North, secretary, The American Battle Monuments Commission, Washington, D. C.; and Leon Zach, president, American Society of Landscape Architects, Washington, D. C.; *Honorary Fellowship* — Jean Manoury, architect for the Chartres Cathedral, Chartres, France; Ernesto N. Rogers, architect and editor, Milan, Italy; and Gustavo Wallis, president, IX Pan American Congress, Caracas, Venezuela; *Citations of Honor* — Society of Architectural Historians and Nathan Harris, A.I.A., organizer and president, Far Eastern Society of Architects, Tokyo, Japan; "Award for Outstanding Service to Architecture by Non-Architectural Group, Society or Business" — *Fortune* magazine, "for its excellent articles on architecture and its relationship to business."

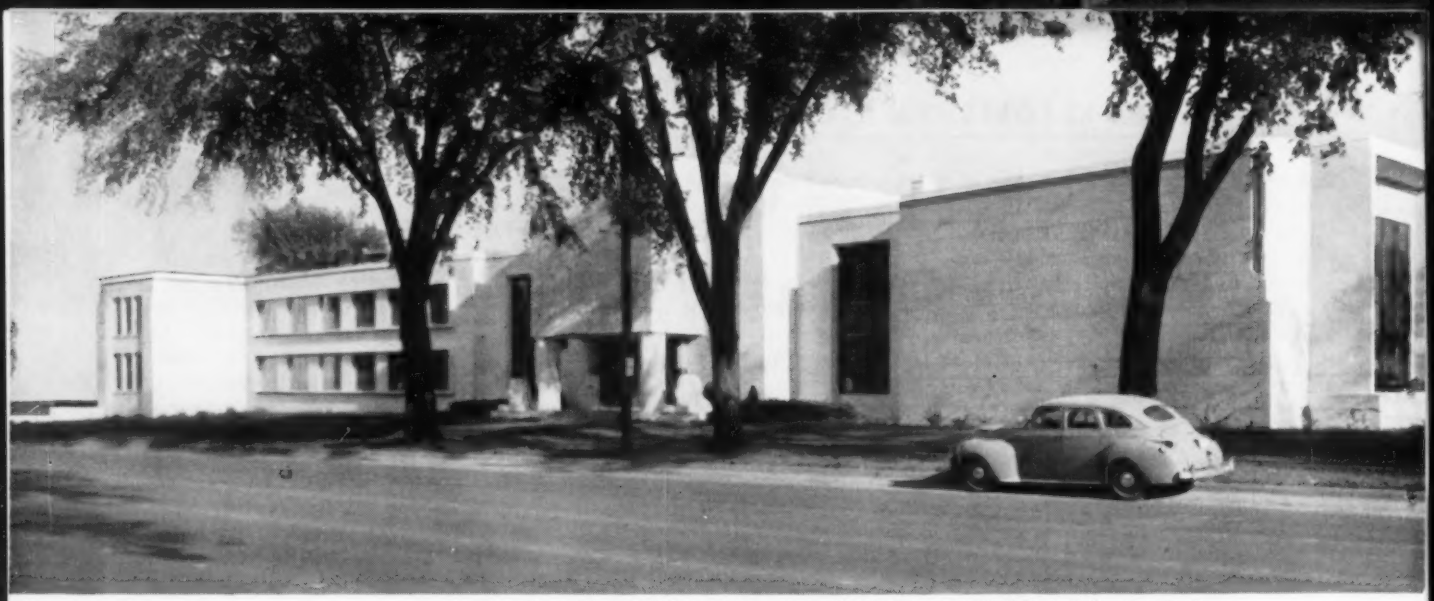
— And the Convention

"Architecture for the Good Life" is the theme, May 15–18 the dates, Hotel Biltmore, Los Angeles, the place — as *nearly* everybody must know by now — for the 88th annual convention of the American Institute of Architects. John Ely Burchard, dean of the School of Social Studies and Humanities at Massachusetts Institute of Technology, will deliver the keynote address; Clarence S. Stein of New York, architect and planner who will receive the 1956 A.I.A. Gold Medal, will make the principal address at the annual banquet following the presentation ceremony; and Mexican architect and planner Carlos Contreras will make the convention's closing address. Seminars on architecture for safety, integration of the arts with architecture and better design for houses will be major features of the program; also scheduled are round tables arranged by the A.I.A. national committees on Preservation of Historic Buildings, School Buildings, Architectural Specifications, Education and Office Practice. Seminar participants will include: (safety) Clinton Gamble, Fort Lauderdale, Fla., chairman of the A.I.A. Committee on Hurricane Resistance; John C. Thornton, Detroit, chairman of the A.I.A. Committee on Human Safety; A.I.A. Regional Director Austin W. Mather, Bridgeport, Conn.; Ulysses Floyd Rible and Cornelius M. Deasy, Los Angeles; (arts and architecture) architect John Knox Shear, New York, editor-in-chief of ARCHITECTURAL RECORD, Joseph L. Young, muralist, Garrett Eckbo, landscape architect, and Millard Sheets, painter, all of Los Angeles; John S. Detlie, Seattle; Dean Sidney Little of

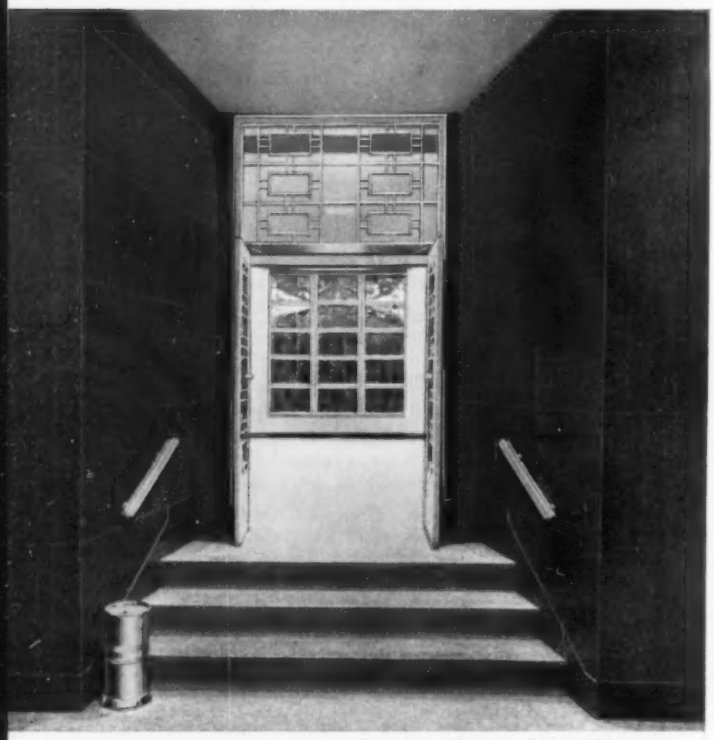
(Continued on page 24)

— Drawn for the RECORD *by Alan Dunn*

"Well, shall we join the ladies?"



Iowa Masonic Library, Museum, and Administration Building, Cedar Rapids, Iowa.
Architects: Hansen and Waggoner, A.I.A., Mason City, Iowa. General Contractor: O. F. Paulson Construction Co., Cedar Rapids, Iowa.



▲ Entrance to "The Hall of Masonry." Beyond the all-bronze doors can be seen the bronze-framed windows at the back of the Hall.

For warmth of color, —there's no substitute

Architectural Bronze outlives fads and fashions—remains a vital, dynamic building material in the hands of modern architects.

Architectural Bronze has the mellow golden color to warm the severity of stone or concrete. It is available in a wide variety of standard and special shapes which, individually or in combination, produce the special designs visualized by the architect.

Architectural Bronze lends dignity, with an air of friendliness.

Architectural Bronze remains beautiful through generations, with only occasional attention. When used outdoors, it changes, on exposure, to the rich, soft shades of weathered bronze. Even after long neglect, cleaning and polishing restore its natural color and luster. If desired,

▼ The "War Memorial Room" at the west end of the main floor.

Main Entrance of the new Iowa Masonic Library, Museum, and Administration Building.
Ornamental Bronze Work: Michaels Art Bronze Co., Inc., Erlanger, Ky. Bronze Windows: Universal Corporation, Dallas, Texas.

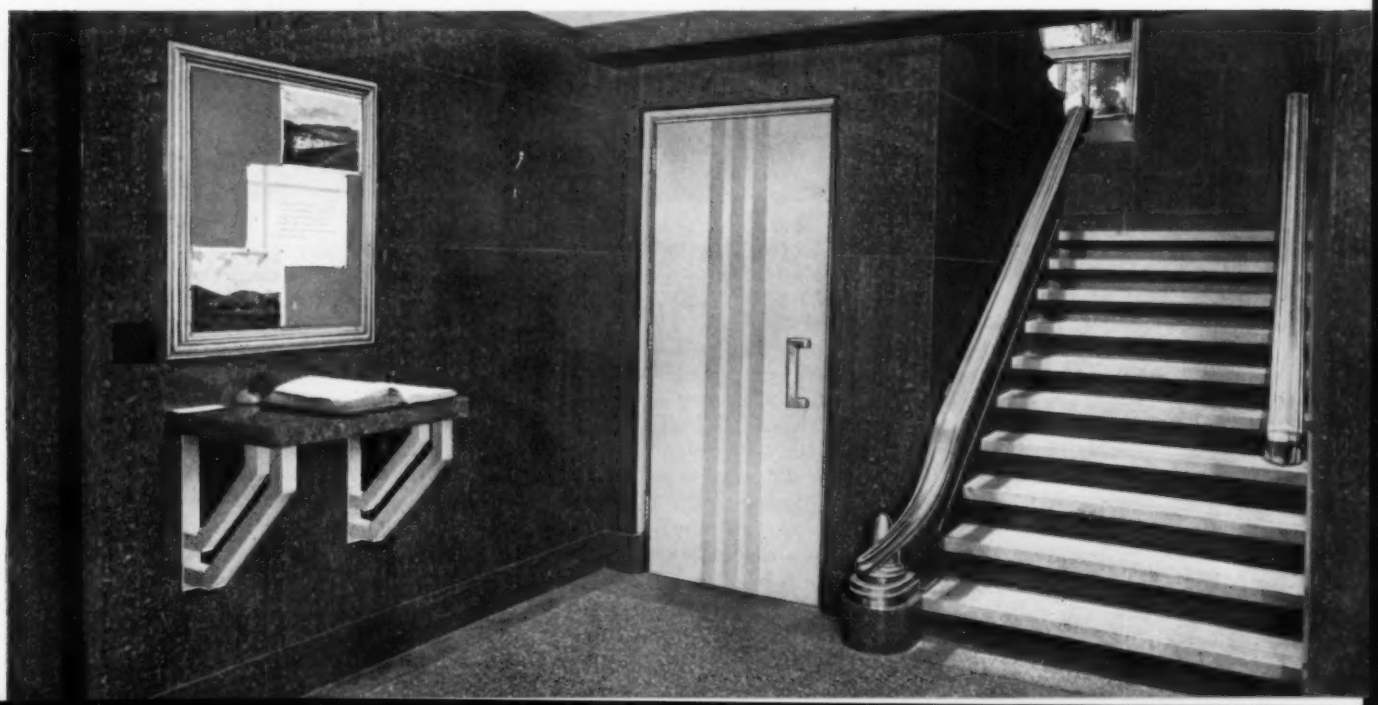
the air of friendliness, and lasting beauty for Anaconda Architectural Bronze

the metal can be treated by the fabricator to obtain an oxidized finish.

As a leader and pioneer in Extruded Metals, The American Brass Company has thousands of stock tools for producing bronze and nickel silver architectural shapes, including 46 threshold designs. For further information write: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

ANACONDA®

West End Foyer on the main floor illustrates use of Anaconda Architectural Bronze in public areas.



THE RECORD REPORTS:

MEETINGS AND MISCELLANY

(Continued from page 21)

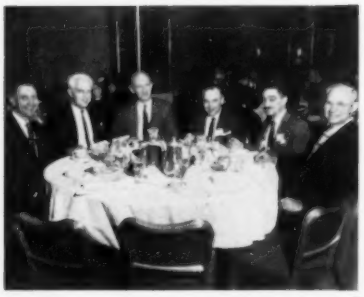
the University of Oregon's School of Architecture and Applied Art; (house design) L. Morgan Yost, Chicago, chairman of the A.I.A. Committee on the Home Building Industry; A. Quincey Jones, Los Angeles, also a member of that committee; Pierrepont Prentice, New York, editor of *House & Home* magazine; Proctor Mellquist, editor of *Sunset* magazine; Mary Hamman, New York, Modern Living editor of *Life* magazine; and A.I.A. President George Bain Cummings. Round table participants will include: Lutah Maria Riggs, Santa Barbara; Henry T. Withey, Los Angeles; Paul Thiry, Seattle; John Lyon Reid, San Francisco; Mrs. Pearl Wanamaker, Seattle, Washington State Superintendent of Public Instruction; Dr. Charles Bursch, Sacramento, an educational consultant; Walter R. Hagedohm, Los Angeles; F. Bourn Hayne, Construction Specifications Institute editor; Peter Vogel, chairman, Education Committee, Southern California Chapter, C.S.I.; Norman Hunter, C.S.I. national director; Albert E. Barnes, San Francisco Chapter, C.S.I.; Joseph McGuinness, C.S.I. president; A.I.A. secretary Edward Wilson, Fort Worth. For the first time, television coverage will come to an A.I.A. convention — NBC's *Home* and *Today* have both announced plans for covering some of the sessions. Other features of the program are "seminar tours" of schools, tract housing, churches and hospitals, arranged by the Southern California (host) Chapter, along with a provocative potpourri of social affairs; and, of course, business matters, including election of new officers. President George Bain Cummings has announced that he will not be a candidate for re-election, and pre-convention nominations, which closed April 4, produced the following (incomplete) slate: for *president* — Leon Chatelaine Jr., of Washington, D. C. (the present treasurer); for first vice president — John N. Richards, of Toledo (the present second vice president); for second vice president — Philip Will, Jr. of Chicago; for secretary — Edward L. Wilson, Fort Worth (the incumbent). Additional nominations will come from the Nominating Committee and (perhaps) the convention floor.

1

4

2

3



5

ARCHITECTS IN THE NEWS — 1. *"Perspective in Architecture" seminar at 50th anniversary of Texas A&M Division of Architecture* — RECORD *editor-in-chief John Knox Shear, the speaker, and architects Harry Ransom, John York and Brooks Martin, panel members. 2. Texas A&M's architecture head since 1929, Ernest Langford, F.A.I.A., honor guest and principal speaker at the banquet which concluded the three-day celebration; he will be succeeded September 1 by Charles Colbert of New Orleans. 3. Antonin Raymond, F.A.I.A., of New York, recipient of the 1956 Medal of Honor of the New York Chapter, A.I.A., in a ceremony at the chapter's 87th anniversary supper dance at New York's Colony Club. On the same occasion Thomas S. Holden, vice chairman of F. W. Dodge Corporation, was inducted as an honorary associate member of the Chapter. 4. Highlight of the 42nd annual convention of the Michigan Society of Architects (in Detroit) — Adrian N. Langius, director of the Building Division of Michigan's State Administrative Department, receives the Society's 1956 Gold Medal from M.S.A. president Elmer J. Manson. 5. President Manson again, with Wilfred Clapp, assistant superintendent for School Organization and Plant, Michigan Department of Public Instruction, who received the Society's honorary membership; Charles A. Blessing, A.I.A., Detroit city planning chief; Frederick E. Wigen, M.S.A. director; Detroit A.I.A. President Suren Pilafian; and Eberle M. Smith, also an M.S.A. director*

(More news on page 28)

Meet John Soeffing, A.H.C.

Like most hardware consultants, Mr. Soeffing works with architects every day. He's a prominent member of the American Society of Architectural Hardware Consultants . . . a specialist who recommends hardware that will meet the architect's most exacting requirements.

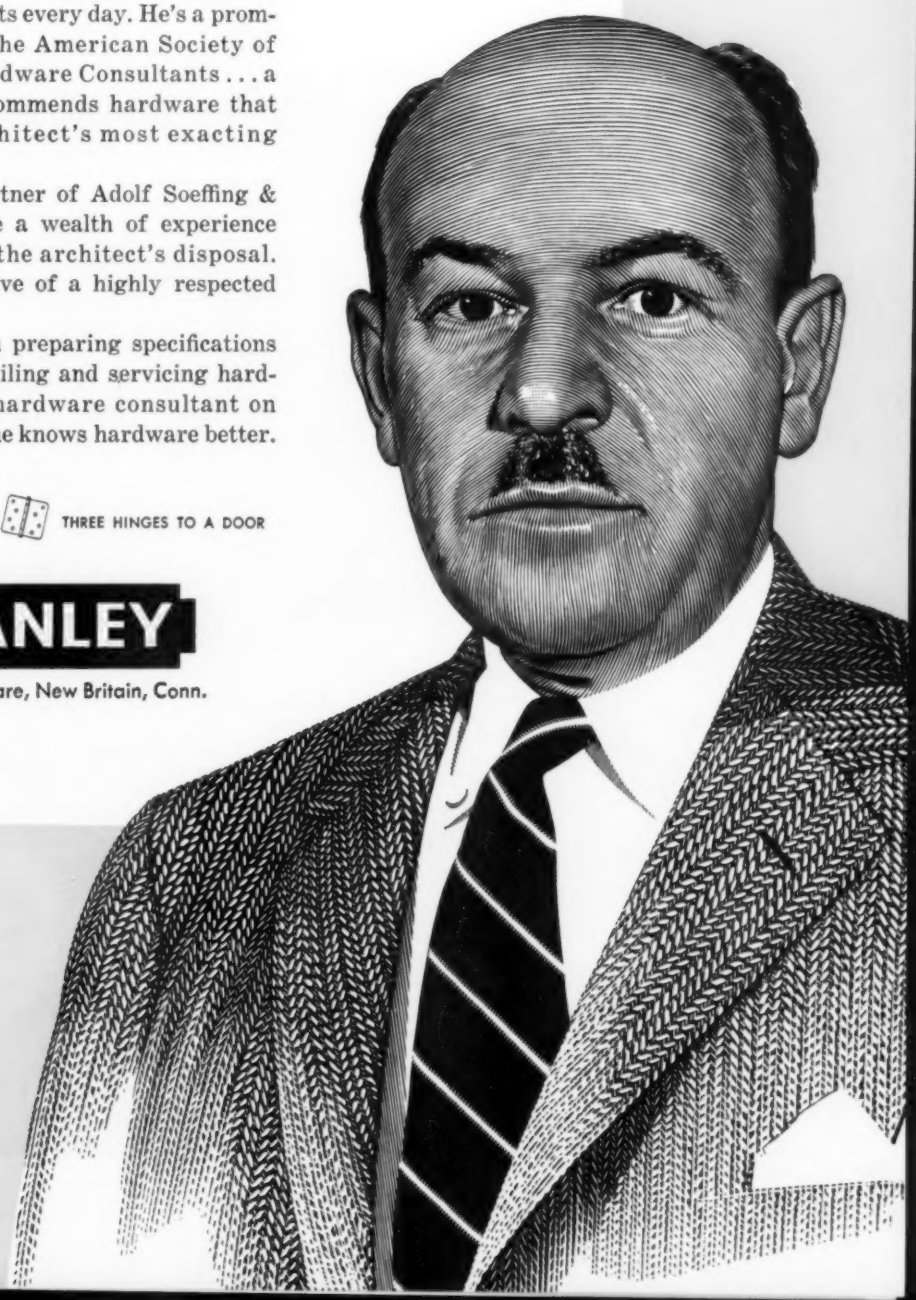
Mr. Soeffing, partner of Adolf Soeffing & Co., Inc., can place a wealth of experience and knowledge at the architect's disposal. He's a representative of a highly respected profession.

For assistance in preparing specifications . . . estimating, detailing and servicing hardware . . . call in a hardware consultant on your next job. No one knows hardware better.

REMEMBER THREE HINGES TO A DOOR

STANLEY

Stanley Hardware, New Britain, Conn.



When All things are

...the better lighting

All these things considered...

- 1. Specific Units for Every Need
- 2. Precision Construction
- 3. Low Installation Cost
- 4. Minimum Maintenance Cost
- 5. Lowest Over-All Cost

make BENJAMIN the choice for better lighting!

considered

choice is BENJAMIN!

Certified Lighting for a Better America

SUSTAINING MEMBER

. . . one of many Benjamin units to be considered for School Lighting from classrooms to auditoriums.

. . . one of a complete line of Benjamin units to be considered for Office Lighting from private offices to reception rooms.

. . . an example of the wide range of Benjamin "area lighting" units to be considered for all types of stores, restaurants, and other commercial locations.

consider:

Specific units for every need!

. . . it's one of the five essential considerations for Better Lighting! It assures the buyer of getting exactly the right unit for the seeing task . . . maximum results from every lighting installation . . . at lowest possible operating and maintenance costs. Benjamin brings you the specific unit for every need without compromise! When you specify Benjamin lighting equipment, you never have to settle for a second choice. Here is a line that is *really complete* . . . as complete as over 50 years of specialization in the manufacture of quality lighting equipment can make it.

Helpful folders on "Things to consider" for the lighting of schools, stores, offices and factories are yours for the asking. Write to Benjamin Electric Mfg. Co., Dept. Q-1, Des Plaines, Illinois.

. . . just one of hundreds of Benjamin Industrial Units to be considered for Factory Lighting from assembly lines to foundries.

XB-10371S

BENJAMIN TRADE MARK LIGHTING EQUIPMENT

SOLD EXCLUSIVELY THROUGH ELECTRICAL DISTRIBUTORS

THE RECORD REPORTS:

MEETINGS AND MISCELLANY

(Continued from page 16)

LEAGUE, IN ITS 75TH YEAR, AWARDS ANNUAL GOLD MEDALS

The Architectural League of New York, this year celebrating its 75th anniversary, opened its birthday year with the 59th National Gold Medal Exhibition.

From a field of six accepted entries, in architecture, the League awarded a Gold Medal and two honorable mentions. One Gold Medal in mural decoration was given in a field of three, while a Gold Medal, a Silver Medal and two honorable mentions were awarded among the eight sculpture entries. The largest number of entries, 14, was in the design and craftsmanship category, in which a Silver Medal and three honorable mentions were presented.

The juries were composed of: for architecture — Walker O. Cain, (chairman), Gordon Bunshaft, Henry R. Shepley, Max Abramovitz and Ralph Walker; for murals — Lumen M. Winter (chairman), Allyn Cox, Helen Treadwell, J. Scott Williams, Charles Baskerville and George Samerjan; for sculpture — Moissaye Marans (chairman), Edmond Amateis, Peter Dalton, Donald De Lue, Leo Friedlander and Vincent Glinsky; and for design and craftsmanship — Harold Bartos (chairman), Max Abramovitz, Harry Bertoia and Carl Otto.

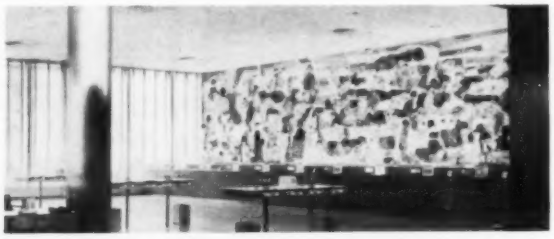
Among other festivities which the League plans for its anniversary year, a dinner has already been scheduled for May 3, to be held in the Metropolitan Museum restaurant.

(Continued on page 334)

GOLD MEDAL in architecture: Olivetti showroom in San Francisco; Giorgio Cavalgieri, architect, and Leo Lionni, designer

HONORABLE MENTION in architecture: Northeast Branch Library in Seattle; Paul Thiry, architect

HONORABLE MENTION in architecture: auditorium and chapel, Massachusetts Institute of Technology; Eero Saarinen, architect, Anderson, Beckwith and Haible, associates



GOLD MEDAL for mural decoration: mural by Fred Conway, First National Bank, Tulsa; Carson & Lundin, architects

GOLD MEDAL in sculpture: bas relief by Marshall Fredericks for Beaumont Hospital, Royal Oak, Mich.; Ellerbe and Co., architects

SILVER MEDAL in sculpture: relief by Oronzio Maldarelli, State Insurance Fund Building, New York; Lorimer Rich, architect

HONORABLE MENTION in sculpture: Cornell War Memorial by Frank Eliscu; Coolidge, Shepley, Bulfinch & Abbott, architects

HONORABLE MENTION in sculpture: relief by Adolph Block for Garfield Restaurant, Brooklyn; Charles Shilowitz, architect

TUTTLE & BAILEY AIR DISTRIBUTION EQUIPMENT

Installed in another outstanding building . . . to meet the most rigid requirements of performance and appearance.

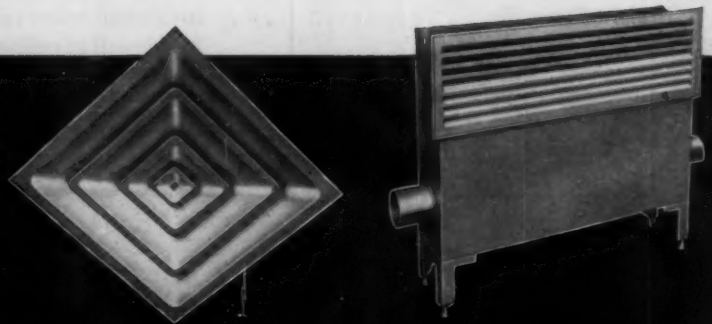
The recently completed 41-story Home Office Building of the Prudential Insurance Company of America is Chicago's tallest and most modern. Air conditioned, of course, Tuttle & Bailey circular and linear ceiling diffusers — and grilles and registers — are installed throughout.

For specific catalog information on T&B Diffusers, Grilles and Registers, or High Pressure Units, write—

TUTTLE & BAILEY

division of ALLIED THERMAL CORP.
NEW BRITAIN, CONNECTICUT

A complete line
of air distribution equipment and accessories
for low and high pressure systems



Prepared by the Engineering Department of Tuttle & Bailey, New Britain, Connecticut

Selecting the Right Equipment

As a service to those responsible for specifying air distribution equipment, Tuttle & Bailey will publish a series of technical articles on this all-important phase of heating, ventilating, and air conditioning systems. It is hoped these articles will be of help to the newcomers in the field and serve as "refresher" information for others.

Complaints arising from faulty air distribution are usually caused by drafts or stuffiness. These uncomfortable sensations are the result of one or more factors: temperature stratification, fluctuating gusts of air, warm or cold spots, or incorrect residual velocities. To obtain the correct residual velocities, and to eliminate spotty and gusty distribution, equipment first must be selected on the basis of its induction characteristics. In addition, we must know the effective area of the equipment selected.

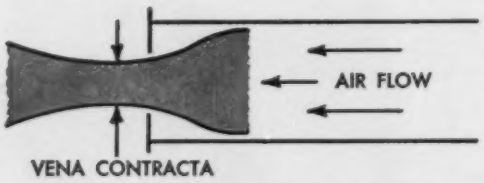
Induction Characteristics

Induction is simply the mixing of supply air and room air above the six foot (occupied) zone, in the room. The various types of air distribution devices available differ widely in the rapidity in which induction takes place. (See table below.)

Ceiling height and type of occupancy must be considered but generally the determining factor in selecting one type of device over another should be by comparison of induction characteristics. It is accepted that the higher the CFM per sq. ft. of area to be conditioned, the higher the induction rate of the device should be.

Effective Area

The performance of an air distribution outlet and the pressure calculations involving it are predicated upon its effective area. What this means can best be illustrated by a sharp-edge orifice located at the end of a duct. As the air approaches the orifice, it assumes a stream shape which at some point in its travel is smaller than the aperture through which it passes. This area is called the "vena contracta" — or the effective area of the orifice.



The same fact applies to an air distribution device. Air does not completely fill the passages of a diffuser — or between the bars of a grille — and at some point

Type	Mounting	Induction
Rectangular or linear diffuser	On ceiling	Low
Straight flow grille	In sidewall at ceiling	Low
Straight flow grille	In sidewall below ceiling	Low
Side deflection grille	In sidewall at ceiling	Medium
Half-round ceiling diffuser	In ceiling	Medium
Full-round ceiling diffuser	In ceiling	High
Full-round ceiling diffuser	Located down from ceiling	High

within the passages, a vena contracta exists. The sum of these vena contracta areas is the effective area of the outlet. Although the shape, size, and number of rings or bars of the device will influence the effective area and the location of the vena contracta areas, the principle applies regardless of design.

Application of Effective Area

The most important use of the effective area of an air outlet is to predict its throw. "Throw" is the distance or radius in feet that an air stream travels from its point of discharge to a point at which its velocity falls to a predetermined value. The velocity of the stream at the selected point determines the residual velocity, or the velocity of air in the occupied zone.

For ceiling diffusers, the throw can be determined by:

$$T = \frac{K \times CFM}{\sqrt{A_e}}$$

where:
- T = The distance in feet the air stream travels to a point at which its motion falls to a predetermined value
- CFM = The cubic feet of air per minute
- K = A constant determined by test and based on the induction characteristics of the diffuser
- A_e = Effective area of the outlet in sq. ft.

"K" Values for Diffusers Discharging 360° Circular Air Pattern

Terminal Velocity	Average Residual Velocity	Flush Ceiling Mounting	Exposed Mounting
100 FPM	25-40 FPM	.0120	.0080
150 FPM	40-60 FPM	.0100	.0066
200 FPM	60-85 FPM	.0075	.0050

As with ceiling diffusers the effective area of grilles and registers must be known to predict their performance. Although ceiling diffusers usually have a fixed effective area, adjustable bar grilles and registers have an infinite number of effective areas depending upon their deflection settings.

To determine the distance an adjustable bar grille or register will throw:

$$T = \frac{K \times CFM}{\sqrt{A_e}}$$

where:
- T = Throw in feet
- K = A constant determined by test and based on the deflection setting of the bars
- CFM = Cubic feet of air per minute
- $*A_e$ = Core area in square inches

"K" Values for Adjustable Bar Grilles and Registers

Angle of Deflection	"K" Values
Straight	.80
22°-0°-22°	.68
42°-22°-0°-22°-42°	.55
55°-42°-22°-0°-22°-42°-55°	.43

*It should be noted that the throw formula differs from the one for ceiling diffusers in that it includes the term "core area" which relates the effective area of the grille to its catalogued size.

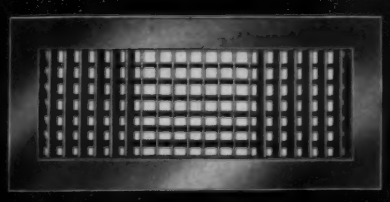
A terminal velocity of 50 FPM is used when selecting grilles because of their lower induction characteristic. This produces a residual velocity of 25-40 FPM.

Conclusions:

1. Select an air distribution device with the right induction characteristic.
2. Know the effective area of the device you select.
3. Determine the right terminal and residual velocities and select the throw of the device to obtain them.

This is the first in the series of these technical articles. In months to come, subjects will cover specific problems encountered in the field.

If you have a specific problem involving air distribution, Tuttle & Bailey's Engineering Department will welcome the opportunity to be of help. Address: R. D. Tutt, Chief Engineer, Tuttle & Bailey, New Britain, Connecticut.



INFORMATION CENTER: HHFA'S INTERNATIONAL HOUSING SERVICE

A question arises as to exclusive American leadership in all technical phases of home building when you talk with Dan R. Hamady, assistant to the Housing and Home Finance Agency administrator, International Housing Service. Any smug, complacent attitude about a single-handed role for this country in guiding the housing destinies of all others dispels quickly.

For Mr. Hamady tells you that his International Housing Service works on a two-way street. Not only does it advise and operate in the extension of many forms of housing information to many countries, but at the same time it is engaged in amassing a considerable store of new knowledge on construction methods and materials flowing in by virtue of its own existence. Such data constitutes a valuable addition to this country's supply of such information and through the services of IHS is readily made available to home builders, architects, engineers, and anyone interested in it.

Histories of the experiences of other nations are being added to our own. True, most of these tell of struggles of less-developed nations trying to overcome housing handicaps imposed by poverty and apathy on the part of their peoples. But often there are recorded achievements that add valuably to the United States home building industry's own knowledge. All this is compiled by IHS, assembled in reference form, and readily made available in response to inquiries about similiar problems either in this country or abroad.

Ask IHS for examples. Officials site the techniques in city planning from Sweden and England; development of prestressed concrete and lightweight aggregate uses in France, Belgium and Germany; the contribution of data on hot and humid climate housing construction supplied from countries considered as far less developed than our own. The old English and continental building societies actually formed the basis for our present savings and loan functions, they point out. And they add the important strides in prefabricating evident in Sweden and Finland since the war.

Altogether, there is a little-tapped source of new information for architects in the housing agency library in Washington, D.C.

"We are here to serve industry, our government and other countries of the world," said Mr. Hamady. "We will answer any and all requests, general or specific."

Inquiries are often referred either to the HHFA library here, or to the United Nations library in New York if the question comes from there. Material is forwarded in reply if it is available in the IHS office here — and it usually is.

The Service furnishes names and addresses of persons or agencies in foreign countries to whom a questioner can write for further information. It tells where the subject in question is located if a trip to the site is desired. Private citizens, Congressmen and U. S. Government officials are furnished letters of introduction and identity of all points of contact if they are going abroad and express an interest in foreign housing.

The low-cost housing area, not unexpectedly, seems to be the important one. IHS reports that just about every country aided asks — How do we finance the new housing you've shown us how to build? This agency has devised the means whereby information about manpower, money, materials, etc. can best be combined to provide good low-cost housing. The ideas circulate not only from the United States to foreign countries directly assisted, but are passed from one foreign country to another by the Service. In this process, IHS carefully notes features of any program that can bring useful knowledge to America's construction industry.

"When we help out any other country, we are helping the United States, though perhaps not as directly as through our mission contacts," Mr. Hamady observed.

IHS "entertains" some 200 persons each year; these are individual or team visitors, private industry or government representatives, or trainees, who come to this country to learn about American home building. Some come under the United Nations, or Economic Cooperation Administration auspices, others solely as their government's delegates. A surprising number of both private and government persons pay their own trip expenses. These prove to be the most intense in their search for new housing knowledge and IHS feels they take back the greater store of information.

For all these visitors, IHS sets up itineraries in this country, confers with them upon arrival and before departure.

The agency also places foreign students in American universities and colleges for courses running as long as two academic years.

At present there are 41 persons engaged in the work for the U. S. government in 21 countries abroad. These are on the payroll of the International Cooperation Administration, carrying on IHS work in Europe, the Far East and Asia, the Near East and Africa, and in Latin America. They include "housing generalists," those who can advise on all aspects of the subject; economists, low-cost housing experts, city planners, architects and engineers.

This constituent of the HHFA publishes the Ideas and Methods Exchange Bulletin which goes at least once each month to 63 countries having agreements with ICA, and to mission chiefs in 25 of these. Thirty-five of these already have been published.

The advisory activities center always in the director of the U. S. Overseas Mission — actual head of ICA functions. IHS comprises technical support for this government service, engaging in recruiting expert personnel, training personnel, and in research of subjects.

Inquiries to IHS run the gamut from financing (most frequent) through solar heat, septic tanks, city sewage systems, earth construction and earthquake design.

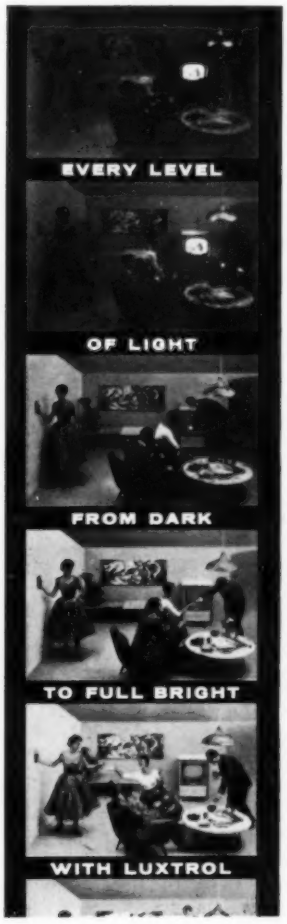
"A great deal of the world's housing is still of earth," one official said, "and the first step is to give these people better earth houses. Last year, in a Voice of America broadcast, Mr. Hamady told Arabic speaking countries: "Mother Earth itself, when properly stabilized with cement, lime, bitumen or other materials, can often provide good building materials if proper pressure is applied. Inexpensive blockmaking machines are now available that anyone can learn to operate. Three to five men working together can produce excellent building blocks." He also told of one country experimenting with bamboo that is treated to prevent decay and insect infestation.

Many questions are put to the agency on earthquake design for housing. Much

(Continued on page 320)
(More news on page 36)

Decorate your clients' homes

the modern new way...with light



Now you can use lighting . . . new LUXTROL **controlled lighting** . . . to give your clients functional and decorative advantages **never dreamed of before!**

At a price they welcome!

You can achieve, by the turn of a LUXTROL dial, the **perfect light effects** for every occasion, activity, mood. Yes, **any level** of light . . . from dark to bright and bright to dark.

LUXTROL banishes the restrictions forced on you by "all-or-nothing" lighting. Gives you unlimited design and functional possibilities for practically every room in clients' houses.

Recommend LUXTROL light control with complete confidence from every point of view. For commercial uses, as well as residential.

LUXTROL is a **well-designed, soundly engineered,** autotransformer-type unit . . . built by a leading producer of commercial lighting-control systems. It has Underwriters' Laboratories approval . . . operates smoothly, silently, safely. It's just as easy to incorporate into your plans as the old-fashioned wall switch it replaces.

What's more, LUXTROL not only controls incandescent lighting, but fluorescent and cold-cathode, too.

See for yourself how easily you can **please clients** by decorating with LUXTROL light control. Mail in the coupon. We'll send you complete information and arrange for you to receive a demonstration . . . right in your own office.

new

LUXTROL Light Control

A product of The Superior Electric Company

The Superior Electric Company
11056 Demers Avenue, Bristol, Conn.

Please send me full design data on new LUXTROL *Light Control.*

Name_____

Street_____

City_____ Zone____ State____

New York contractor buys 1,484 G-E for 3 new

"After looking over the air conditioning market, I picked the new General Electric *Thinline*. It was perfect for the installation I wanted—through the wall without any overhang.

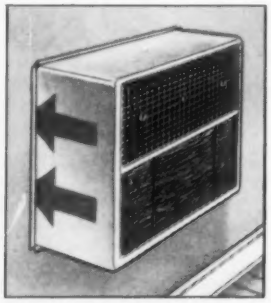
"And the G-E *Thinline* is compact. It only takes two-thirds as much space, but still has as much capacity and efficiency as previous corresponding models. It has powerful exhaust capacity. Every living room and bedroom of the apartments we're building will have a General Electric *Thinline*—which should be very attractive to tenants. They can choose the temperature, the air flow, pulling in fresh air or getting rid of stale air—all to suit themselves.

"One of the most important reasons I chose the *Thinline* is the General Electric name itself. People have faith in General Electric. So do I. Their products are usually way ahead of the field, soundly engineered and backed by prompt delivery and good service."

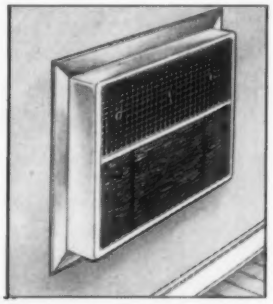
—ALAN P. HOROWITZ,
H. R. H. Construction Corp., New York, N. Y.

Look how easy it is to install the new General Electric *Thinline* through the wall:

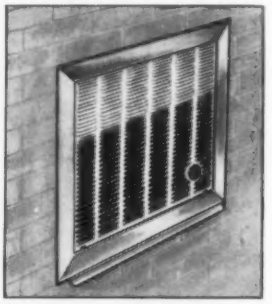
Build the sleeve and frame into the wall during construction. The opening for the sleeve is about 27" wide by 22" high.



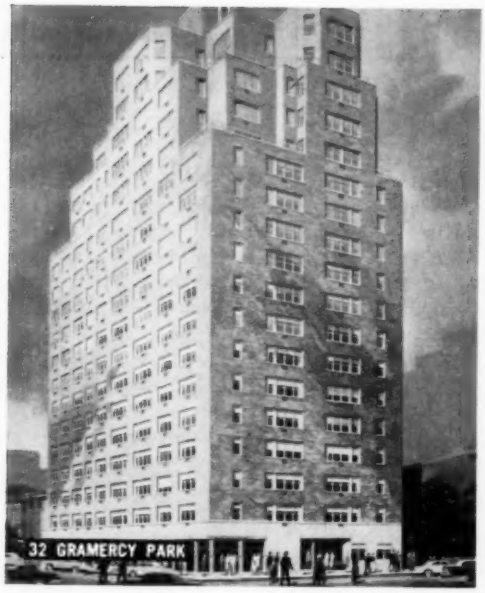
Slide the G-E *Thinline* into the sleeve. Four screws hold it in place, give you a quick and weathertight installation.



Simple but decorative wood trim frame adds a final touch. Notice how little this 16½" unit projects into the room.

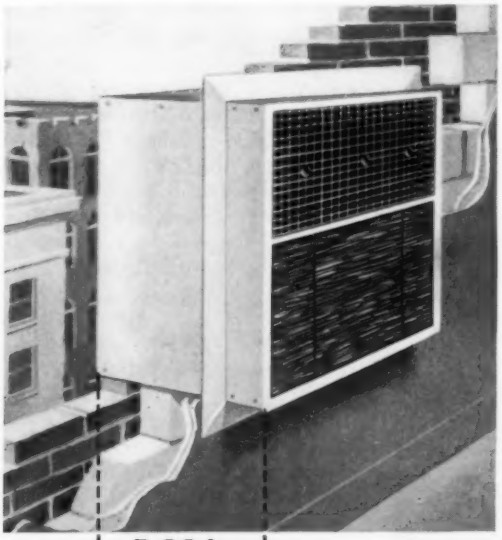


Flush on the outside, the G-E *Thinline's* aluminum grille is designed to hold upkeep down, prevent staining of wall.



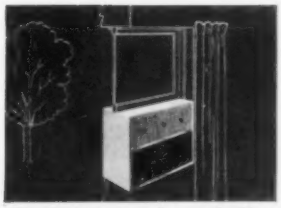
Thinline Room Air Conditioners apartment buildings

Fits through the wall with no unsightly overhang – or fits any window of present buildings

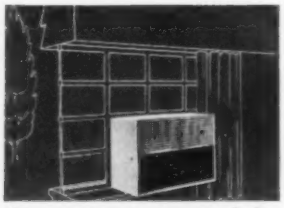


Only 16½ inches thin

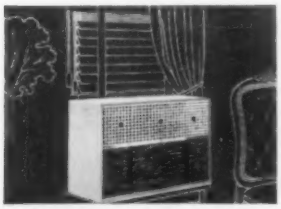
There's little, if any, overhang. Operates at low cost (only 7½ amperes for ½-hp. model). New High Power Factor and efficient design give high cooling capacity. Available in ½, ¾ and one horsepower models, all in same size cabinet. Written guarantee. General Electric Company, Appliance Park, Louisville 1, Kentucky.



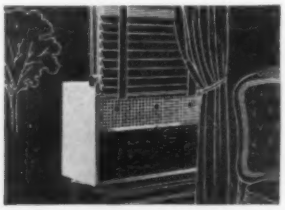
Fits in upper or lower half—whichever you want—of any conventional double-sash window.



Fits casements, too—and the window can still be opened and closed, whenever you wish.



All inside—and the windows can still be raised and lowered for easy cleaning.



All outside—windows work, and there's still very little projection. It's only 16½" thin!

Progress Is Our Most Important Product

GENERAL ELECTRIC

 By John Caulfield Smith

O.A.A. MEMBERSHIP REFLECTS ONTARIO'S POSTWAR GROWTH

The number of architects practicing in Ontario has almost doubled since the end of the war, George D. Gibson, president of the Ontario Association of Architects announced at the organization's 66th annual convention. Membership in the O.A.A. now totals 765. The professional organization this year added, for the first time in 20 years, two new chapters — the Lakehead and North Ontario chapters.

The theme of the meeting, which was held at the Royal York Hotel in Toronto February 17–18, was "Architecture and the Allied Arts." Philip C. Johnson, New York architect, was the keynote speaker at the opening luncheon.

Following the luncheon, a panel led by architect Gordon S. Adamson discussed the theme of the meeting. Architect James A. Murray contended that legislation should be enacted to make sculpture compulsory on all public buildings, a suggestion which sculptor Elford Cox rejected, saying that the artist was obliged to convince the architect and the public of the worth of his services. Mr. Cox did say, however, that the artist must rely on the architect to believe in the importance of the alliance of art and architecture. Angus MacDonald, a stained glass artist, said that criticism of overuse of glass stemmed not so much from the quantity used as from the manner in which glass is employed in contemporary building.

On the second day of the meeting, Karl O. Van Leuven Jr., director of design, planning and production in the Detroit office of Victor Gruen and Associates, led a seminar on "Integrating Architecture and the Arts."

At the annual banquet, A.J.C. Paine, president of the Royal Architectural Institute of Canada, presented the R.A.I.C. medal for 1956 to Richard Elmer Tustian, a 1955 graduate from the School of Architecture, University of Toronto. The award is made to the graduating student who is considered most likely to succeed in the profession.

The $200 scholarship presented by the O.A.A. to a second-year architectural student at the University of Toronto with the highest standing in architectural design was awarded to Norman Robinson. A $100 prize for a third-year student exhibiting proficiency in subjects related to building construction went to Carmen Stewart Cornell, and a $100 prize for the student with the highest standing in the graduating class at the School of Architectural Technology, Ryerson Institute, went to Joseph Michael Filipovic. Toronto Architectural Guild Gold Medals were awarded to Yusing Jung and David Powrie.

The architects elected George Y. Masson, of the Windsor firm of Sheppard & Masson, their new president. Other new officers include E. C. S. Cox, Islington — vice president; and G. Everett Wilson, Toronto — treasurer. John D. Miller, Toronto, continues as secretary. Councillors include Mr. Masson, Mr. Gibson, Mr. Cox and Mr. Wilson, as well as Watson Balharrie of Ottawa, Philip Carter Johnson of London, Lynden Y. McIntosh of Fort William and Alvin R. Prack of Hamilton.

New council of the O.A.A. — back row, left to right: John D. Miller, secretary; G. Everett Wilson, treasurer; Alvin R. Prack, councillor; E. C. S. Cox, vice president; Lynden Y. McIntosh, councillor. Front row: George Y. Masson, president; George D. Gibson, immediate past president. Absent: Watson Balharrie, Philip Carter Johnson

Left to right: Donald Jackson, member of the convention committee; Karl O. Van Leuven, Detroit, seminar director; and George S. Abram, convention chairman

At the opening session: Hugh P. Sheppard, a past president; George D. Gibson, immediate past president; and A. J. C. Paine, president of the R.A.I.C.

BUILDING FUTURE HOPEFUL, GORDON COMMISSION HEARS

The Gordon Royal Commission on Canada's Economic Prospects, set up by the Government to take an "almost unlimited" look at the country's economic future, heard from the Canadian Construction Association that construction in Canada, which may total $6 billion this year, has a good chance of rising to $15 billion by 1980.

The C.C.A. brief praised apprenticeship training programs for producing skilled craftsmen and potential supervisors, but said that the number of

(Continued on page 40)

NEW KING-SIZE TROFFERS BY GUTH

FOR DRAMATIC "SKYLIGHT" EFFECTS

2 x 4's

A HARMONIOUS BLEND OF BEAUTY AND LIGHTING EFFICIENCY

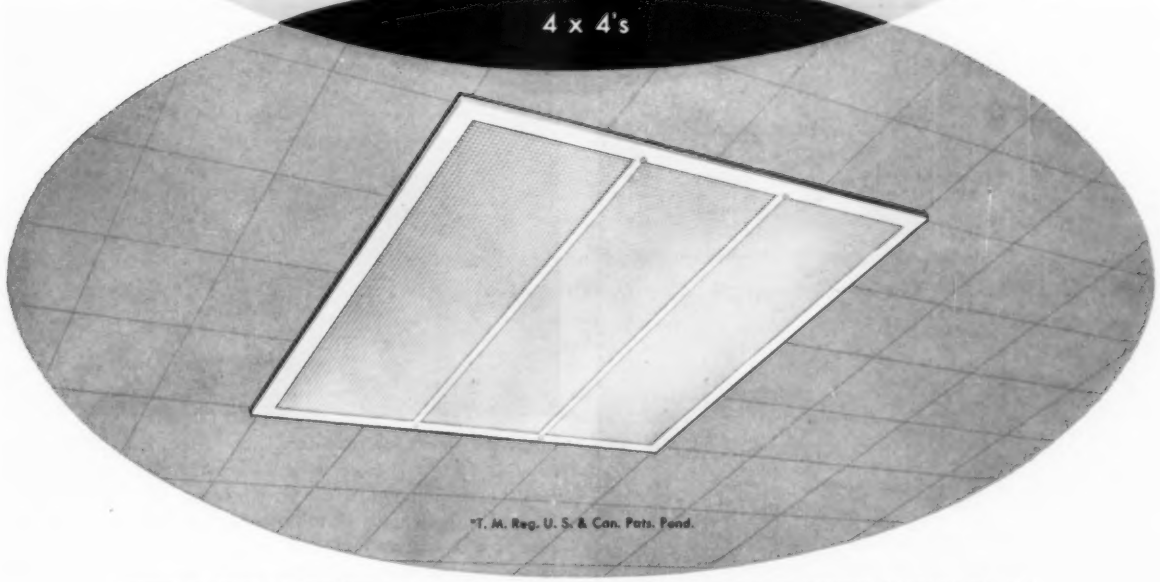
Giant, recessed 2 x 4's and 4 x 4's with all the outstanding Guth Troffer features ... combined with the great *Guth GrateLite* Louver-Diffuser.* They create large luminous islands of efficient fluorescent and Slimline illumination ... with excellent shielding and diffusion ... low cost maintenance.

They fit easily into any block or tile opening. For 2, 3, 4, and 6 lamps.

THINK OF THE DESIGN POSSIBILITIES!

THE EDWIN F. GUTH CO., ST. LOUIS 3, MO. **TRUSTED** NAME IN LIGHTING SINCE 1902

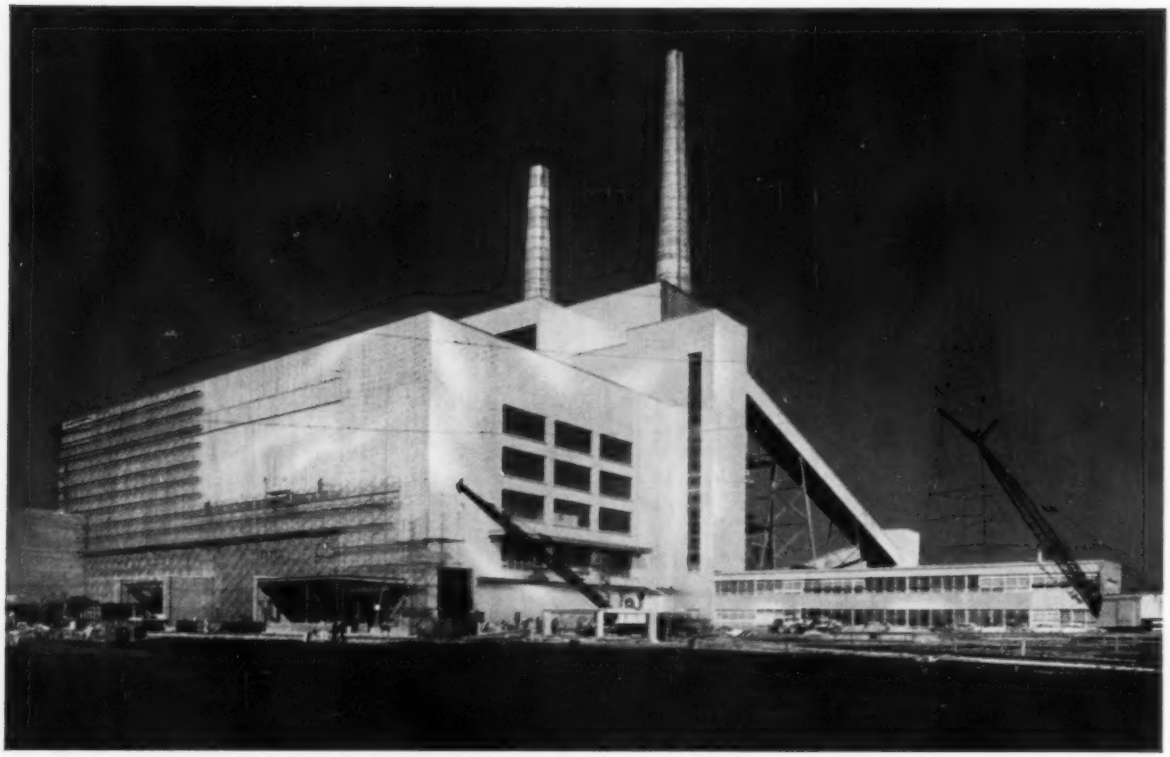
4 x 4's



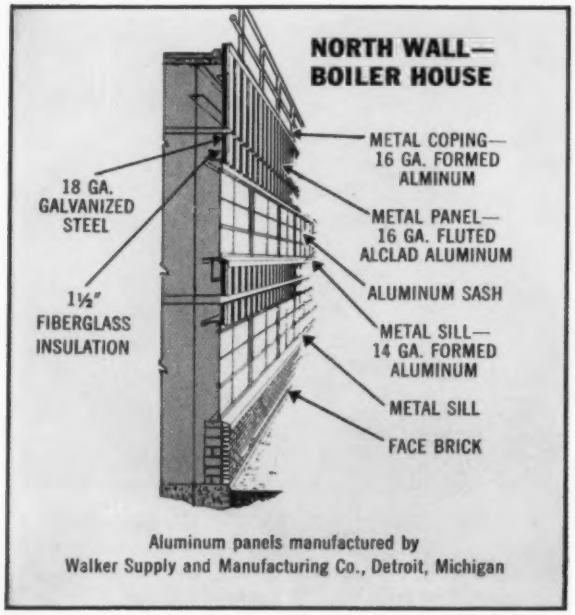
*T. M. Reg. U. S. & Can. Pats. Pend.

WRITE ON YOUR LETTERHEAD FOR YOUR COPY OF THE BIG, BRAND NEW GUTH TROFFER CATALOG NO. 50-J

Detroit Edison estimates big



Detroit Edison Company's new generating station at River Rouge, Michigan—constructed with outside walls made of Kaiser Aluminum selected and fabricated by Walker Supply and Manufacturing Co., Detroit, Michigan. This unique design reduces structural steel tonnage, foundation requirements and maintenance costs.



Aluminum panels manufactured by
Walker Supply and Manufacturing Co., Detroit, Michigan

Insulation Coverings made of Kaiser Aluminum protect insulating materials from moisture and mechanical damage. Resist corrosion. Won't rust. Give long service without painting and with virtually no maintenance. Aluminum coverings also provide high reflectivity, low emissivity for greater protection against heat loss. Light weight reduces handling and transportation cost.

savings by the use of lightweight aluminum walls!

THE Detroit Edison Company selected light, strong aluminum sheet and extrusions for the outside walls of their new generating station at River Rouge, Michigan.

This unique, lightweight wall design allows an 8,000-ton reduction in total weight and reduces structural steel and foundation requirements—as compared to the 12″ masonry curtain-type walls used in previous plants.

Another important reason aluminum was selected for this job is its high resistance to corrosion—especially necessary in the industrial atmosphere of the River Rouge site. Result: maintenance on the exterior walls is kept to a minimum.

As a basic producer of aluminum, our efforts are dedicated to the job of helping to improve building products and to reduce their costs.

We will gladly share with you to the fullest our fabricating and engineering skills. Or for names of building products manufacturers who will be glad to work with you, contact the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum and Chemical Sales, Inc., *General Sales Office,* Palmolive Bldg., Chicago 11, Ill.; *Executive Office,* Kaiser Bldg., Oakland 12, Calif.

Kaiser Aluminum

setting the pace—in growth, quality and service

More ways to cut costs with aluminum building products!

Kaiser Aluminum Shade Screening keeps buildings as much as 15° cooler under the hottest summer sun. This reduces the load on air conditioning equipment—thus reducing operating costs. The 17° angle of the louvers blocks direct rays of the sun, yet provides glare-free light.

Ventilation Louvers made with Kaiser Aluminum won't rust or rot—never stain adjacent surfaces. Require less maintenance, fewer replacements. Cost less than building material they replace. So easy to handle that construction is faster, lower in cost. Light weight also reduces transportation costs.

Air Conditioning and Heating Duct Systems made with lightweight Kaiser Aluminum go up faster—cut erection costs almost 12%. Pound for pound, cover three times the areas of galvanized ducts. Deliver 17 to 46% more heat due to aluminum's low emissivity. Easy to fabricate and erect.

THE RECORD REPORTS

NEWS FROM CANADA

(Continued from page 36)

apprentices registered in the building trades "are too few even to replace those leaving the labor force, let alone meet the needs of larger construction programs ahead." The brief also complained of the lack of graduate and undergraduate courses for students planning to enter the industry: "University courses in building construction, construction engineering and highway engineering are offered in other countries and it is believed that conditions warrant similar courses in Canada."

Commenting on the record of three serious steel shortages within the last ten years, the C.C.A. called for an increase in mill production "to overcome the shortages that have periodically retarded economic activity and to reduce our dependence on the U. S. for such a large proportion of our steel requirements."

Get the Facts on Why "Paper Cured" Concrete is Best

Read Why Sisalkaft is The Most Effective Curing Medium

Send for This Booklet

Genuine
ORANGE LABEL
SISALKRAFT
Tough • Waterproof
PAPER

AMERICAN SISALKRAFT CORPORATION
DEPT. ARS, ATTLEBORO, MASS.
Please send Booklet "Curing and Protection for Better Concrete".
Name.....
Company.....
Address.....
City.....*Zone*....*State*.....

B.C. ELECTRIC WILL HAVE NEW OFFICES IN VANCOUVER

Scheduled for completion by February 1957, the new headquarters building for British Columbia Electric Company Ltd., Vancouver, will cost an estimated $6.5 million.

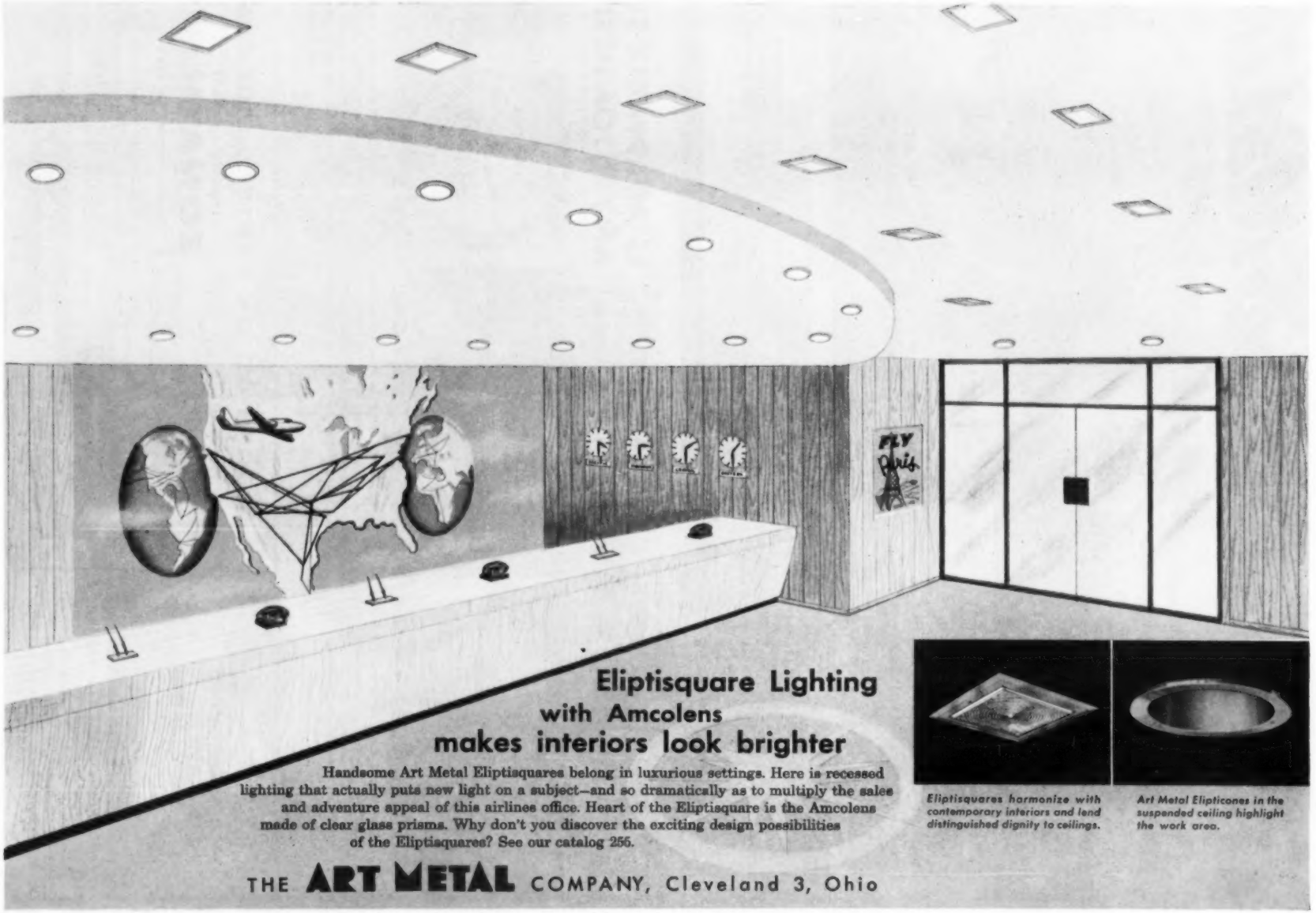
The building, which will be 21-stories high, will have a concrete service core to handle elevators, air conditioning and an automatic mail conveyor. The exterior walls will be double-paned glass and enamelled steel.

Sharp & Thompson, Berwick, Pratt, of Vancouver, are the architects.

ARCHITECTS IN ALBERTA NAME OFFICERS FOR 1956

The Alberta Association of Architects has elected H. L. Bouey president of the organization for 1956. Other officers are W. M. Milne, first vice president; D. G. Forbes, second vice president; J. B. Bell, honorary secretary; G. R. Ascher, honorary treasurer; and K. C. Stanley, H. A. Henderson, H. L. Bond, T. A. Groves and J. McIntosh, councillors.

(Continued on page 44)



Eliptisquare Lighting with Amcolens makes interiors look brighter

Handsome Art Metal Eliptisquares belong in luxurious settings. Here is recessed lighting that actually puts new light on a subject—and so dramatically as to multiply the sales and adventure appeal of this airlines office. Heart of the Eliptisquare is the Amcolens made of clear glass prisms. Why don't you discover the exciting design possibilities of the Eliptisquares? See our catalog 256.

Eliptisquares harmonize with contemporary interiors and lend distinguished dignity to ceilings.

Art Metal Elipticones in the suspended ceiling highlight the work area.

THE **ART METAL** COMPANY, Cleveland 3, Ohio

History-in-the-Making

Take Time Out To Witness Remarkable New Developments Now Taking Place In

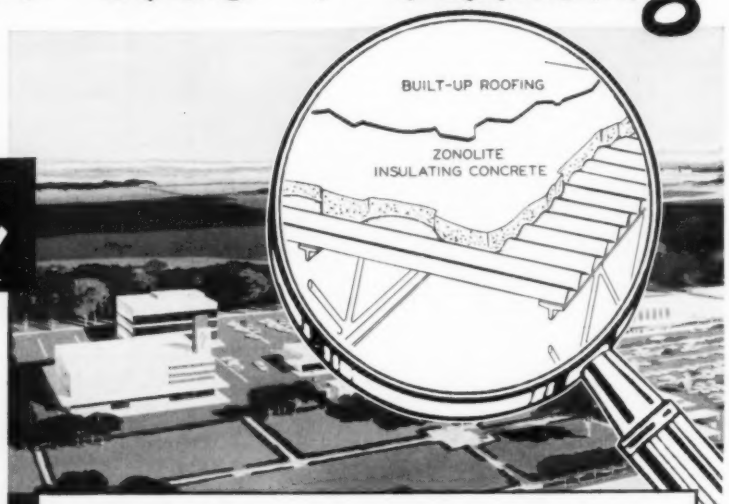
ROOF CONSTRUCTION

The construction industry has now found that Zonolite Vermiculite roof deck systems are superior to all the other systems, old and new. Zonolite decks go on faster, are 100% fireproof... reduce insurance premiums... reduce labor's cost... insulate.

YES... new Zonolite roof deck systems provide superior performance, at lower cost. New methods of construction are clearly illustrated in booklet form. See coupon.

Astonishing New FIRE TEST

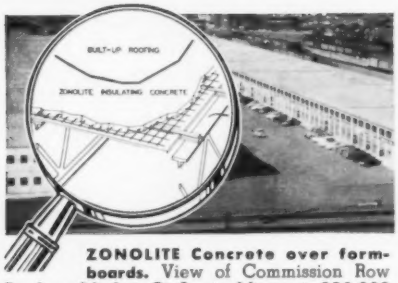
At Underwriters' Laboratories experts review results of 1 hour, 49 minute fire test. Reinforced Zonolite concrete-over-steel deck survived raging flames *seven times longer* than steel not protected with Zonolite.



Important new development in corrugated metal deck. Here is artist's conception of Great Southern Shoppers Mart, Bridgeville, Pa. *Zonolite Concrete was poured in place over corrugated metal. Zonolite pours on fast,* cuts labor costs. Reduces insurance premiums as much as ½. Seamless, monolithic construction protects against "tar-drip" should fire originate in under-areas. Mail coupon for free booklet.

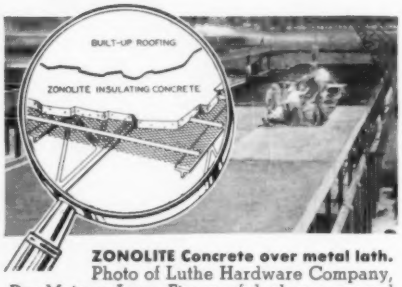
Arch.: C. Melvin Frank

ZONOLITE® IS ADAPTABLE TO ANY ROOF DESIGN!



ZONOLITE Concrete over form-boards. View of Commission Row Produce Market, St. Louis, Missouri. 326,000 sq. ft. poured for this seamless, permanent roof deck. High insulating value.

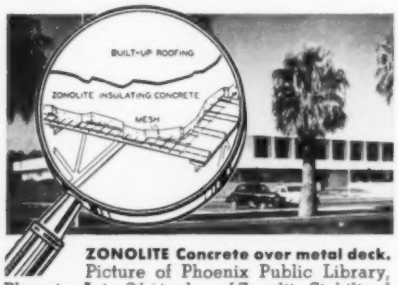
Arch.: L. Roy Brown & Assoc., St. Louis



ZONOLITE Concrete over metal lath. Photo of Luthe Hardware Company, Des Moines, Iowa. Fireproof deck was poured in place, cutting days off production schedule.

ZONOLITE Concrete over paper-backed wire lath. Campbell High School, Smyrna, Georgia. Zonolite roof deck cannot burn; provides the high degree of fire safety required.

Arch.: Bothwell and Nash



ZONOLITE Concrete over metal deck. Picture of Phoenix Public Library, Phoenix, Ariz. 2½ inches of Zonolite Stabilized Concrete Aggregate; 1:6 mix. An insulating, fireproof, rotproof deck.

Arch.: Alden B. Dow

ROOFS GO ON FASTER... *CUT COSTS*

when you specify

ZONATILE®

the all-in-one roof slab

Here's the new short-span concrete slab that is speeding construction (one man can handle lightweight Zonatile with ease) wherever a permanent, fire-safe insulating deck is called for. Zonatile has an attractive under-surface. Saws like wood. Goes into place fast—in any weather. Reduces dead-weight. Cuts erection time and costs.

with ZONOLITE®!

*and...*one of the major revolutions taking place in building construction methods is

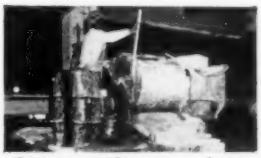
MACHINE PLACEMENT OF ZONOLITE plaster

Wherever it goes Zonolite's high speed plaster "rig" is demonstrating that machine application is cutting plastering time more than half. And non-combustible Zonolite (applied to beams, trusses, walls, ceilings) is saving as much as 50% on insurance premiums. Zonolite machine plastering saves time, labor, money. Mail coupon and we will send you the name of the applicator nearest you already equipped with one of the remarkable plaster-placing machines for demonstration.

Prudential Bldg., Chicago
Architects: Naess and Murphy

IN HOUSING!

Homes are plastered and ready for sale in half the time, when Zonolite is machine applied. And Zonolite Vermiculite plaster finish puts your homes-for-sale in the luxury class...at low cost. No supply bottle-necks. Zonolite is always available from one of 40 Zonolite plants strategically located throughout America.



One man machine mixes plaster with ease.

Scratch coat goes on at high speed.

Plaster spurts to a speedy finish on ceilings.

FOR FIREPROOFING!

Zonolite means "best possible fire protection"—earns highest possible fire ratings. This machine-placement is enabling architects and builders to build greater performance into a structure faster and at lower cost. And Zonolite reduces deadweight—saves on steel.

Prudential Building. *Zonolite Plaster machine-applied to beams for fireproofing.*

Ford Motor Company Administration Building. *50,000 yds. of Zonolite Plaster machined on.*
Arch.: Skidmore, Owings & Merrill

Beverly Hilton Hotel, Beverly Hills. *Zonolite Plaster Fireproofing. Zonolite Acoustical Plastic.*
Arch.: Welton Becket & Assoc.

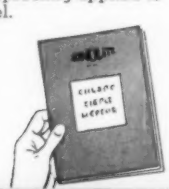
ACOUSTICAL PLASTIC FIREPROOFING!

Now, for the first time, 4-hour fire ratings are being achieved by machine-applying Zonolite Acoustical Plastic *direct to underside of steel floors.* You gain 7" per story, eliminating 1 story of dead-space for every 14-stories of construction. *Right:* Harvey Department Store, Nashville, Tenn. Zonolite Acoustical Plastic Fireproofing applied to steel.

Arch.: Marr & Holman

Just Published

Mail coupon for free booklets illustrating the widespread trend to Zonolite products... includes full technical data, drawings and specifications.

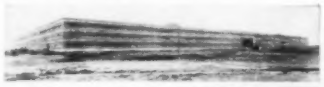


ZONOLITE BRAND VERMICULITE AGGREGATES

ZONOLITE COMPANY
135 South LaSalle Street, Chicago 3, Illinois

ACOUSTICAL PLASTIC SOUND-CONDITIONING

Wherever noise is a nuisance, Zonolite Acoustical has the coefficient required to "deaden" it—applies to any clean, firm surface, flat or irregular, by hand or machine. *Right:* Army Finance Center, Ft. Benjamin Harrison, Indiana.



AMAZING NEW THIN WALL SYSTEM EARNS 5-HOUR RATING...SPEEDS CONSTRUCTION...CUTS COSTS

Zonolite insulating back-up for spandrel, panel and curtain walls is only ⅓ to ⅙ as dense as heavier materials. Is wind resistant, reduces deadweight; increases rentable floor space!

Right: First Security Bank Bldg., Salt Lake City.
Arch.: Bank Bldg. Corp. of America, St. Louis

MAIL COUPON TODAY

Zonolite Company, Dept. AR56
135 So. LaSalle St., Chicago 3, Illinois

Please send me without obligation free booklets checked below.

☐ G-101 "Systems of Lightweight Construction" including data on roof decks.

☐ PA-29 "Machine Application of Zonolite Plaster, Acoustical"

Name.....
Firm Name.....
Address.....
City.....**Zone**.....**State**.....

THE RECORD REPORTS

NEWS FROM CANADA

(Continued from page 40)

TWENTY CMHC SCHOLARSHIPS TO BE AWARDED THIS YEAR

Twenty fellowships and bursaries to assist students studying community planning and housing will be awarded by Central Mortgage & Housing Corporation for the academic year 1956–57.

The offices of architect Pierre Rinfret, Sillery, Que., were designed to defer to the residential section in which it is located

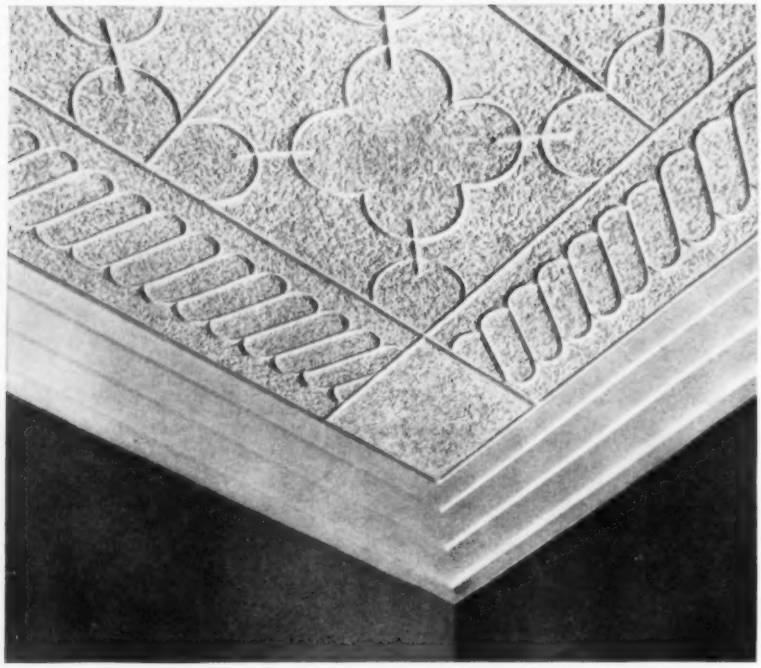
The awards will include two senior fellowships for special studies or research in housing and residential development; 15 fellowships of $1200 each for the study of community planning; and three bursaries of $800 each for graduate students undertaking special studies in housing or urban development.

Information can be obtained directly from the chairman of the Advisory Group, Development Division, Central Mortgage & Housing Corporation, Ottawa.

NEWS NOTES

The Manitoba Association of Architects has moved to 966 Dorchester Ave., Winnipeg 9, Man. . . . **PR in Quebec:** the public relations committee of the Province of Quebec Association of Architects has arranged for publication of a weekly construction page in the French-language paper *Le Devoir*. . . . **PR in Ontario:** the Ontario Association of Architects sponsored a booth at the National Home Show, held in Toronto March 30 through April 7; the exhibit was built around material in the organization's brochure "The Architect — Who He Is and How He Can Serve You". . . . **A 19 per cent increase** over 1955 construction can be expected this year for a total of $6.2 billion in construction expenditures, according to the Federal Department of Trade and Commerce; details are contained in the white paper on "Private and Public Investment in Canada — Outlook 1956" . . . . **Starts on new houses** financed under the National Housing Act rose to a high of 65,595 in 1955, a 30 per cent increase over 1954; total starts for Canada numbered 138,278. . . . **The Baker Gold Medal** of the Institution of Civil Engineers, London, has been

(Continued on page 46)



There's no ceiling on unusual effects with IMPRESSED DESIGNS on KILNOISE*

*ACOUSTIC PLASTER offers you a chance to include Impressed Designs on ceilings or walls in your interior planning. Impressed Designs, first and most effectively used on KILNOISE Acoustic Plaster, can follow geometric, floral, emblematic or contemporary lines. *You* make the tracing, a skilled plasterer does the rest.

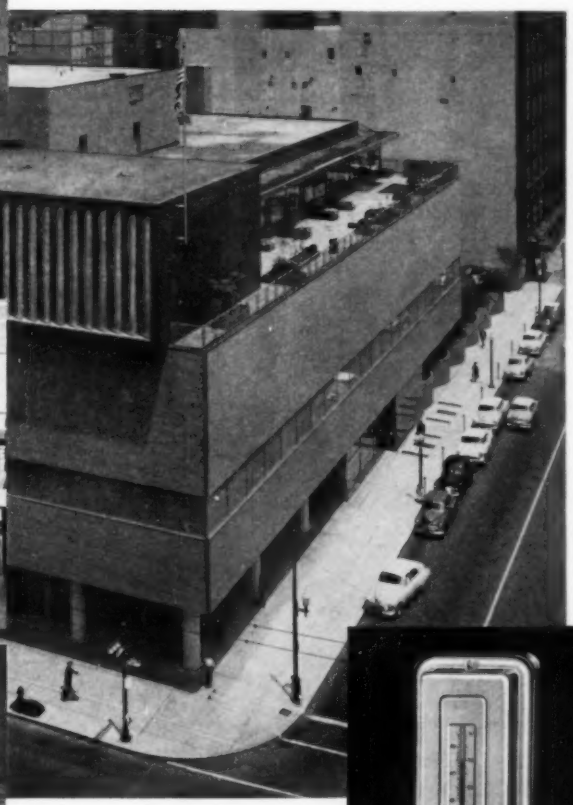
KILNOISE Acoustic Plaster provides a Noise Reduction Coefficient of .60 . . . is moisture-resistant and fire-retardant . . . takes paint perfectly and cleans easily. For the most successful applications of acoustic plaster, *always specify* KILNOISE. *Kelley Island Division of Basic, Incorporated, Cleveland 15, Ohio.*

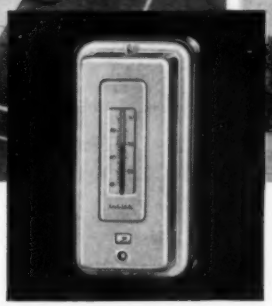
KILNOISE

ACOUSTIC PLASTER

Cincinnati Public Library

Architects: WOODIE GARBER & ASSOCIATES
Associated Architects: SAMUEL HANNAFORD & SONS
Mechanical Engineers: WM. E. BODENSTEIN & W. W. SHUSTER
Htg. and Air Cond. Contractor: PECK-HANNAFORD & BRIGGS CO.





Ideal Comfort in this

Department Store of Knowledge

Is Assured by **POWERS** *Year 'round Air Conditioning Control System*

Cincinnati now has one of the nation's most colorful and attractive contemporary libraries. It is fully air conditioned.

Some of the Library's many features are: a children's room with child's size furniture, also a story hour room; film and recording center; a rare book room and director's room with stainless steel operable louvers on the exterior; rooftop terrace with planting boxes and reflecting pools; ground floor has a garden, pool and parking lot.

As modern as the building itself, is the Powers individual space control system which assures these important benefits: Maximum thermal comfort and fuel savings; low operating and maintenance cost; 25 to 40 years of reliable control with a minimum of repairs often reported by users.

Consult Powers on your temperature and humidity control problems. Experience gained here and in thousands of other significant buildings may be helpful to you.

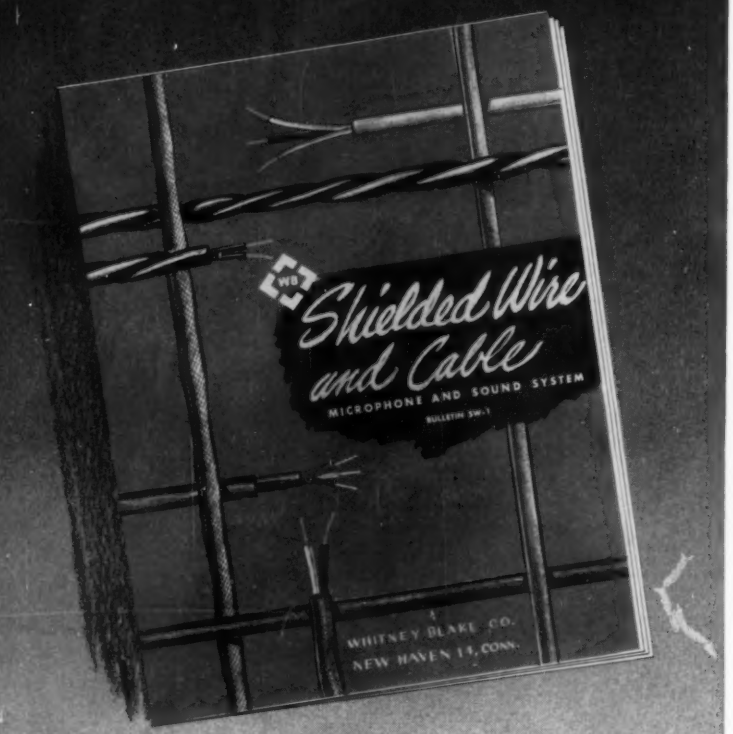
THE POWERS REGULATOR COMPANY

SKOKIE, ILLINOIS | *Offices in chief cities in U.S.A., Canada and Mexico*

65 Years of Automatic Temperature and Humidity Control

(c61)

. . . GET THIS BRAND NEW CATALOG



WRITE TODAY for this "just-off-the-press" catalog which includes Whitney Blake high quality microphone cables, new types of speech input and sound system cables with semi-rigid polyvinyl chloride insulation, signal wires, and multipair intercommunications cables.

This catalog will be sent without charge—write for it today.

© 1955

Well Built Wires Since 1899

WHITNEY BLAKE COMPANY

New Haven 14, Connecticut

THE RECORD REPORTS

NEWS FROM CANADA

(Continued from page 44)

awarded to William R. Schriever of the Division of Building Research of the National Research Council; this is the first time that the medal has been presented to a Canadian. . . . **The O.A.A. Craftsmanship Medal** went this year to Samuel Rosenberg, a registered apprentice in electrical wiring and installation at the Provincial Institute of Trades, Toronto. . . . **The Association of Consulting Engineers of Canada Inc.** has elected J. Georges Chenevert, president; James F. MacLaren, vice president; and F. J. Friedman, honorary secretary-treasurer. . . . **To reduce architect-engineer tension** and to clarify the areas of operations of the two professions in Ontario, the O.A.A. has invited the Association of Professional Engineers to appoint representatives to a joint committee to study the situation. . . . **A branch office** has been opened in Kitchener, Ont., by Leslie Kemp, Brantford architect. . . . **A firm change** has been announced by Toronto architect Harry D. Burston, whose firm has become Burston & Wells upon the admission of John Malcolm Wells to partnership. . . . **A new partnership** has been announced by Herbert R. Agnew and B. G. Ludlow, Architects, in Toronto. . . . **Upcoming events:** May 18 — Annual meeting, Nova Scotia Association of Architects, Lord Nelson Hotel, Halifax; May 23–25 — Annual meeting, Engineering Institute of Canada, Sheraton Mount Royal Hotel, Montreal; June 6–10 — Annual assembly, Royal Architectural Institute of Canada, Banff Springs Hotel, Banff, Alta.

Contracts Awarded: Comparative Figures (in $ million)

*Compiled by the editor and staff of *The Building Reporter*, from information collected by MacLean Building Reports

(More news on page 48)

OCEAN AIR ELEMENTARY SCHOOL, CITY SCHOOL BOARD, NORFOLK, VIRGINIA

John A. Simpson, A.I.A.
Architect, Norfolk, Va.

Another new school saves money with the Nesbitt Series Wind-o-line System

The $600,000 Ocean Air Elementary School of Norfolk, Virginia, will have "the thermal environment most conducive to learning" because Architect John A. Simpson specified *heating and ventilating by Nesbitt.*

By designing for a zoned, two-pipe, forced-hot-water installation, the architect reduced costs with the Nesbitt Series Wind-o-line System. Mains and piping were simplified; night controls and approximately 1,000 lineal feet of pipe covering were eliminated.

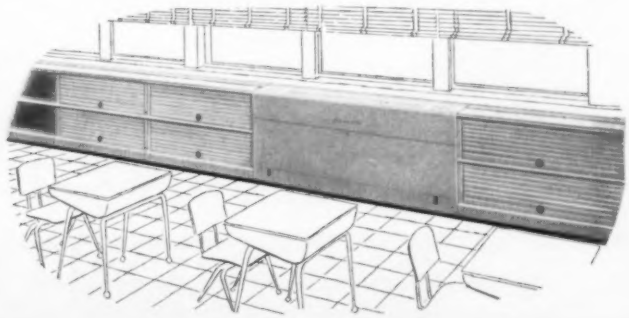
The key to the economy of the Nesbitt Series Wind-o-line System is the Syncretizer's hot water heating element which multipasses a much smaller quantity of higher temperature water than is circulated by conventional systems. This reduces the size of pipes and pumps and permits the Wind-o-line tubing to serve as supply and return piping for entire classroom wings, thus eliminating mains, costly pipe trenches, coverings, and runouts. Without other investment, the system's gravity heat maintains overnight temperatures.

Besides economy, the Nesbitt System offers greater comfort and protection. With the water temperature regulated by outdoor temperatures, the desired thermal environment is better maintained in every classroom and Wind-o-line protection along exposed surfaces is constantly related to actual needs.

Other systems requiring pipe trenches and runouts cost up to 20% more in construction, equipment and installation expenses. It will pay you to go Nesbitt.

Write today for Publication 104

Wind-o-line radiation may be had in wall-hung casings integrated with the Syncretizer, or recessed in standard Nesbitt storage cabinets. Architect Simpson chose this "Nesbitt Package" because it saved 30% over custom wood shelving.



Nesbitt

SERIES WIND·O·LINE SYSTEM

MADE AND SOLD BY JOHN J. NESBITT, INC., PHILADELPHIA 36, PA. SOLD ALSO BY AMERICAN BLOWER CORPORATION

U. S. OFFICE OF EDUCATION ESTIMATES 1954–60 SCHOOL NEED AT $16 BILLION

Publication of the long-range planning phase of the school facilities survey of the U. S. Office of Education late in March shed but little light on the continuing controversy over the number of classrooms needed to provide adequate instruction for a growing enrollment through 1960.

This phase of the survey, produced in the school housing section of USOE under the direction of Ray L. Hamon, chief, is based on data gathered from 38 states in 1954. Analysis of these statewide plans for school plant construction in the light of needs defined in detail by each state reporting led Office of Education officials to the conclusion that citizens of this nation must finance around $16 billion in capital outlay to provide approximately 476,000 classrooms and related facilities between 1954–55 and 1959–60.

In January, when President Eisenhower sent his special message on education to Congress, the Department of Health, Education and Welfare said that in the light of all needs, a reasonable goal for total classroom construction over the next five years would be approximately 470,000 rooms.

In connection with publication of the latest figures a few weeks ago, Commissioner of Education S. M. Brownell stressed that state reports were submitted to Washington according to existing and contemplated satisfactory administrative units and according to suitable school centers serving logical attendance areas.

The different methods employed by

(Continued on page 362)

Shaw's exclusive AIR-e-ATED Radiant Heat is the result of proper radiator design. It's an engineered, health-guarding combination of radiant and convected heat that eliminates room temperature extremes and assures proper room heat distribution. Choice of same end or opposite end tapping gives engineers full latitude for correct radiator location, permits simplified piping layouts and reduced piping costs. Space-saving (only 3" thick), one-piece-bonded construction is combined with a modern, paneled exterior design that blends beautifully with all room decor. Shaw Radiators are available in a wide range of styles and sizes, all operating on steam or hot water at pressures up to 150 psi. Why not find out today how Shaw's choice of models, Shaw's many exclusive advantages, can become useful in solving *your* room design problems? There is a Shaw-Perkins Representative near you — or, write direct.

NEW 16-PAGE BROCHURE
Describes and illustrates typical problems involving room design and heat distribution. Write for your free copy today!

SP-10

SHAW-PERKINS
MANUFACTURING CO.
201 EAST CARSON ST., PITTSBURGH 19, PA.

PRIVATE ARCHITECTS NAMED TO ADVISE ON CAPITOL JOB

In spite of the alarms, it appears there will be no ill-considered "desecration" of the U. S. Capitol. Following a procedure which is becoming more and more a standard for important government programs, the Commission for the Extension of the United States Capitol last month appointed a "consulting and advisory group" of private architects "to assist the Architect of the Capitol in determining the proper architectural treatment of the East Front of the Capitol and the necessary changes to be made on the interior of the building."

The group: Arthur Brown Jr. of San Francisco, John F. Harbeson of Philadelphia and Henry R. Shepley of Boston.

Also selected, "as the Associate Architects and Engineers for the Extension of the Capitol and other improvements and changes authorized" by Acts of Congress in August 1955 and February 1956, were Roscoe De Witt and Fred L. Hardison of Dallas, Alfred Easton Poore and Albert Homer Swanke of New York, and Jesse M. Shelton and Alan G. Stanford of Robert and Company Associates of Atlanta.

The Commission itself is composed of Vice President Richard M. Nixon, as president of the Senate; Sam Rayburn, as Speaker of the House of Representatives; and J. George Stewart, as Architect of the Capitol.

The Commission's announcement said that preliminary planning is now in progress.

ARCHITECTURAL RECORD

WESTERN SECTION

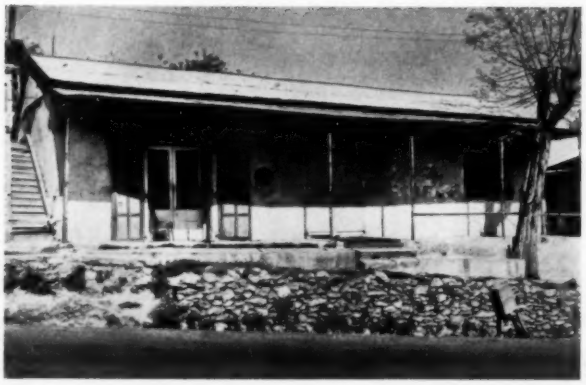
Western Editor:
ELISABETH KENDALL THOMPSON **2877 Shasta Rd., Berkeley 8, Calif.**

Copyright 1956, all rights reserved. F. W. Dodge Corporation, 119 W. 40th Street, New York 18, N. Y.

Courtesy S. F. Museum of Art

1

1. Don Juan Bautista Alvarado's house, built in 1837 in San Pablo, is oldest house in Bay Area. Low pitched roof, wide overhang show early recognition in design of climatic factors



Courtesy S. F. Museum of Art

2

2. Pipe columns, one-floor plan, complete simplicity of this house in gold rush town of Angel's Camp antedate by almost a century the low, spread-out, casual California house of early 1930's

3. Gregory house, Berkeley, begun in 1904, added to twice, is prototype of rambling "California ranch" house in design approach, not in detail. John Galen Howard, architect, Ira Hoover and W. C. Hays, architects for later additions

4. Taylor house, Berkeley, built in 1908 (torn down in mid 1930's), showed remarkable concern for light and shadow inside as well as out, and for advantageous use of site. Louis Christian Mullgardt, architect

ARCHITECTURE FOR LIVING: 1881 TO 1956

A Look at the San Francisco Area's Contribution to Residential Design

3

Courtesy S. F. Museum of Art

4

Opening event in celebrating the Northern California chapter's 75th anniversary will be the House Tour on May 23 which is being presented by the Women's Architectural League of Northern California. Both early and recent examples of residential work by San Francisco architects will be shown.

SEVENTY FIVE YEARS AGO a small group of architects in San Francisco received the charter for a chapter of the American Institute of Architects, the eighth to be established by the organization and the first west of the Mississippi. The rather daring decision to grant a charter to a group in so distant a place as San Francisco — for most Easterners, Chicago was "the West" and the Chicago chapter had been the Institute's Westernmost outpost — was probably more significant than the Institute itself realized: not only did it give

5

6

7

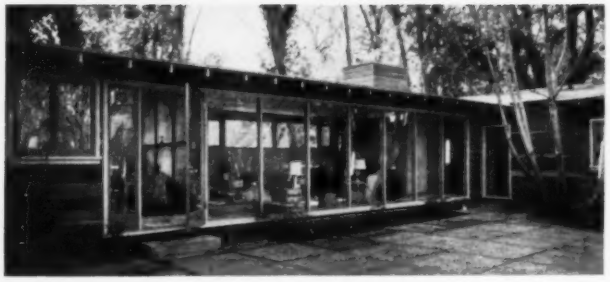
Lew Tyrell (S. F. Museum of Art)

8

Top photo, Gabriel Moulin (S. F. Museum of Art)

9

10



11

ARCHITECTURE FOR LIVING: 1881 TO 1956

the A.I.A. a stake in the evolving culture of a new part of the country but, more important, it gave support and prestige to architects in a place which was already beginning to be a wellspring for that culture. San Francisco was the West's first center of artistic effort: to it came artists in all fields and through their work there radiated an interest in the arts which sparked development of other centers elsewhere along the Pacific slope.

The earthquake and fire of 1906 wiped out much of the work of this charter group, particularly in the downtown section of San Francisco. Some houses in outlying districts and in surrounding communities survived, however, and through them it is possible to trace a consistent contemporaneousness in the residential work of the architects in and around San Francisco. This quality of continuity, along with the vitality found as much in the houses of sixty or so years ago as in those of today, is their special attribute. But the continuity has been dynamic, not static; it has produced a tradition of evolving design in which the impact of new ideas has been both a leavening and a balance-wheel. Although such an impact often manifests itself as an abrupt break with previous concepts of design, its effect in the Bay Area was one of continuous assimilation and interpretation in local terms.

In the beginning many factors accounted for the premises on which the design approach was based: the dramatic topography of the area with breath-taking views from so many of its sites; the mild climate with its seasonal span of 24 hours (thanks to the fog which can suddenly blow in from the ocean or roll over the Berkeley hills from the Central Valley); the lush growth of vegetation; the accessibility of a suitable and inexpensive material for construction — the redwood trees which still provide for much of the residential construction in the area; the paradox of parched, brown hills lapped by the inexhaustible waters of San Francisco Bay. But even more important than these factors were the people themselves who were responsible for the

13

12

houses that were built — the clients and the architects, transplants from other parts of this country and even from other countries; bold and adventurous, not only in building a new economy in a new land but in expressing in buildings (their own houses, to be sure; not the commercial and public buildings, neither of which could afford to be a personal expression) the new way of living which geographic, climatic and social factors made possible.

In the strictest sense, the best of Bay Area architecture has always been contemporary. It belongs to the time for which it was designed. But it belongs also to its past and to its future; it is at each stage of its evolution one part of the continuing whole which is that architecture, besides being a social art, must be a sympathetic art, particularly in residential design: sympathetic with client, site, climate, materials, social custom, suffusing each of the design factors with the art of architecture.

— E. K. T.

5. *Reminiscent of English domestic architecture but with individualistic and free interpretation: Bruce Porter house, San Francisco, 1905. Ernest Coxhead, architect*

6. *No slave to architectural dogma, Bernard Maybeck used forms, both past and contemporary, on his own highly individualistic terms. Massive tree trunks support second floor of this pre-earthquake San Francisco house designed by him, recently remodeled by John Funk, architect, for Walter Landor*

7. *Only woman architect of early group, Julia Morgan designed many houses as well as larger buildings. Early houses were surfaced in typical redwood shingles, incorporated traditional detail in unconventional ways. Joy house, Berkeley, 1906*

8. *Willis Polk, architect for famous glass-fronted Hallidie Building in San Francisco, was well-known for elegance of houses, never too formal for casual house-to-garden relationship, which he designed. Moffitt house, Piedmont, 1912*

9. *By early 1930's, William Wurster was vigorously carrying on tradition of progressive independence earlier San Francisco architects had established. This house in Los Altos, one of first to use concrete block with esthetic success, was built in 1936*

10. *During same period Gardner Dailey's gracefully proportioned houses were representative of new trend toward "large small house" with fewer rooms, more spacious interior areas, more informality. This week-end house was built in 1935*

11. *John Ekin Dinwiddie with associates Henry Hill and Phillip Joseph designed many prize-winning houses toward end of the '30's. This one in Marin County has living room with two walls paneled in glass for greater integration of house and garden. Taylor house, 1940*

12. *Hillside house in Berkeley designed by Clarence Mayhew in 1940 shows free interchange of indoor and outdoor areas which was natural outgrowth of early architects' adaptation of Oriental architectural concepts*

13. *Bowman house by Francis Joseph McCarthy, a large-small house on difficult site, and Quillen house by Ernest Born, for Stanford professor, were among houses shown in first survey of Bay Area residential architecture at San Francisco Museum of Art, 1949*

14. *Post World War II period saw further development of large-small house as in this ranch house in Stockton, built in 1948. Joseph Esherick, architect*

Present Bay Area work indicates two trends: assimilation of new ideas from architectural schools in East, and continuing refinement of previous concepts

14

To meet demands for "global air commerce age-to-be" new runways, and terminal facilities, and heliports in outlying sections of the city, are being proposed for airport. Pereira & Luckman, Welton Becket & Associates and Paul R. Williams are architects and engineers

Tentative plan for Bunker Hill Redevelopment Project proposes transformation of present blighted area into residential, commercial and trade-civic center with residential population of 8000, working population of 5000 to 9000, transient population of 1800 in hotel and motel. Pereira & Luckman are supervising architects with Welton Becket & Associates, architects, and Donald R. Warren Company, engineers

LOS ANGELES LOOKS TO THE FUTURE

VISITORS to Los Angeles for the A.I.A.'s 88th convention won't be able to see most of these buildings because they have yet to be built. Some areas of the city, like the Civic Center, have been part of a long-term development program; others, like Bunker Hill, are destined to undergo large-scale changes. Height regulations limit buildings to 13 floors but despite the serious parking problems which higher buildings would create, an end to this limit is currently being considered. Freeways, too, are changing the city; there are fewer trees and the constantly increasing number of automobiles serves to enhance the sense of impermanence that has pervaded all of California and particularly Los Angeles. Speed is something that must be lived with, and Los Angeles knows this and evidences it by the plans it is making for expanding the airport: designs for it are based on the premise that future aircraft speeds will make necessary only five or six major airports in the world. Los Angeles aims to be one of them and it aims to be ready for the "global air commerce age that is just around the corner." Since Los Angeles confidently looks forward to a day when it will have about tripled its present population, it also has to look forward to new and vast responsibilities.

CR 16 DARK GREEN

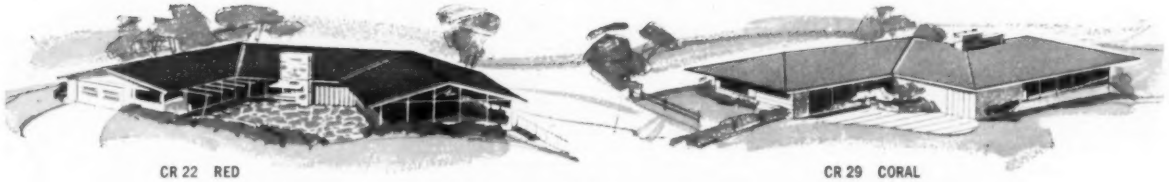
CR 49 BRONZE

NEW...COARSE AGGREGATE

CR 41 BROWN

CR 87 BLUE

ROOFING STONES IN



CR 22 RED

CR 29 CORAL

8 BEAUTIFUL COLORS!

CR 17 LIGHT GREEN

CR 95 SILVERTONE

PRODUCT OF 3M RESEARCH

3M Brand Ceramic-Color Stone Offers Beauty and Lasting Protection for low-slope, built-up roofs

Here is an architect's dream come true . . . a really new look in low-slope built-up roofs. 3M Brand Ceramic-Color Stone opens up great new decorating possibilities because you may select from 8 color-fast shades . . . silver tones, greens, browns, corals, and blues, unobtainable with natural stones or marbles.

These colors are "fired on" by the same special process used in the manufacture of 3M Roofing Granules . . . supplied to the building trades for more than 30 years. Ideal for colorful landscaping, these stones are tough, durable and uniformly graded . . . dense and completely opaque to provide maximum protection for the asphalt base from the damaging ultra-violet rays of the sun. The pebble-sized stones pack tightly on roof tops giving an appearance of depth and ruggedness with a built-in shadow effect. 3M Brand Ceramic-Color Stone is applied in a simple "mopping-on" operation exactly the same as with natural stones. The material is specially treated and shipped dust-free for maximum adhesion. All colors are available from a single source. Shipped in 100 lb. bags.

3M BRAND

CERAMIC-COLOR STONE

Manufactured at Little Rock, Ark. and Corona, Calif.

Made in U.S.A. by Minnesota Mining and Mfg. Co. General Offices: St. Paul 6, Minn. In Canada: P.O. Box 757, London, Ontario. Export Sales Office: 99 Park Avenue, New York 16, N.Y. Makers of "SCOTCH" Brand Pressure-Sensitive Tapes, "SCOTCH" Brand Magnetic Tape, "3M" Adhesives, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing.

MINNESOTA MINING AND MFG. CO.
Dept. MN-36, St. Paul 6, Minn.

- ☐ Send me FREE booklet on 3M Brand Ceramic-Color Stone.
- ☐ Send me FREE sample box of 3M Brand Ceramic-Color Stone.
- ☐ Send me name of Distributor nearest me.

Name_____ Title_____

Company_____

Address_____

City_____ Zone____ State_____

GG CR (arc)

PALOS VERDES STONE is the largest selling decorative natural stone in the West. Originating in the heart of the beautiful and fabulous Palos Verdes Peninsula of Southern California, it is available in various distinctive types offering the widest range of colors, textures, and sizes. Full-color brochure available on request.

Palos Verdes Stone • Great Lakes Carbon Corporation
612 South Flower Street • Los Angeles 17, California

the aristocrat of decorative natural stone

PAUL LÁSZLÓ *features* Palos Verdes **STONE** *in his fabulous new California home*

PAUL LÁSZLÓ, BEVERLY HILLS, INTERNATIONALLY FAMOUS DESIGNER OF FINE HOMES AND MODERN INTERIORS

PALOS VERDES STONE creates a magnificent decorative effect of majestic beauty and quiet dignity, which lends beauty and charm to your home and contributes to your gracious and happy living!

a new visionaire® for maximum visual comfort

Specify Sunbeam's L920 series for installations requiring high intensity lighting at the work plane and where low brightness at normal viewing angles is important.

Specify Sunbeam's 930 series for areas where maximum light is desired and where lengthwise shielding is not requisite.

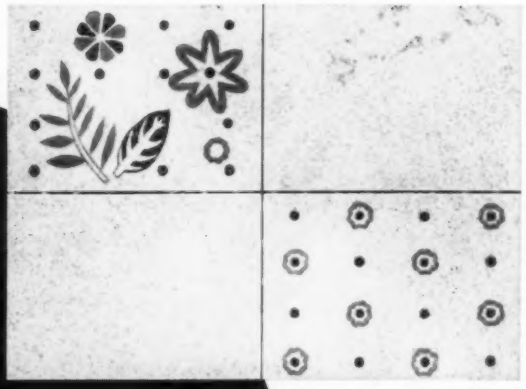
An engineering triumph—the new 920 series Visionaire® is designed for high intensity, low brightness illumination. Through skillful use of diffuse Alzak double parabolic reflectors, 93.3% of the total illumination output is concentrated within the usable 0° to 60° work zone. Alzak reflectors and louvers not only distribute light more efficiently but sharply decrease glare from normal viewing angles for the ultimate in visual comfort.

Engineered for installation and maintenance ease, too: Ample knock-outs; continuous wiring channels; chain-suspended single-unit center "V" and louver assembly and diffuse Alzak with lifetime finish. Enamelled parts Bonderite-treated for maximum protection. Write for bulletin 747.

SUNBEAM visionaire

SUNBEAM LIGHTING COMPANY
777 E. 14th Place, Los Angeles 21, California

Sycamore

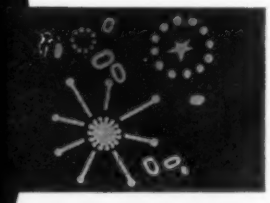


South Seas

exciting new decoratives in

HERMOSA

Glazed Ceramic TILE



Winter Night

Line of Light

ONLY HERMOSA OFFERS SUCH A LARGE CHOICE OF COLORS, SIZES AND *EXCLUSIVE* DECORATOR DESIGNS

HERE ARE TILE IDEAS that sell homes and win remodeling jobs. Hermosa decorative tile gives architects, builders, designers and color coordinators greater opportunity to express creative ideas in one of the oldest, yet newest mediums of expression. The new decoratives shown here are among scores of vibrant patterns in Hermosa *glazed ceramic* Tile.

EXCLUSIVE Hermosa designs—match custom handprint wallpapers by W. P. Fuller & Co. It's the year's most exciting decorator plan... a new feature Mrs. America will admire, love to touch and ASK FOR in new homes and in remodeling. Call or write today for folder illustrating California Coordinates.

CALIFORNIA COORDINATES achieve fresh decor with exciting new *matching* decorative Hermosa Tile and fine custom handprint wallpapers. These decoratives have the unique ability to harmonize with other lovely papers or painted surfaces.

GLADDING, McBEAN & CO.

LOS ANGELES • SAN FRANCISCO • SEATTLE
PORTLAND • SPOKANE • PHOENIX

Member, Producers Council

THE WINDOWS YOU WANT

made and installed on time by Soulé

Soulé Intermediate Window Wall and Windows in
Hamilton Recreation Center, San Francisco.
W. G. Merchant, A.I.A., M & K Corp., Contractor.

Soulé Intermediate steel windows impose no limit to stock sizes. When you design a window or window wall job, specify the opening sizes you want. Soulé sales engineers will work with you, help assure you the exact window you design at the price you want to pay. All Soulé metal windows are made in the West, for fast transmission of details and delivery to your job on time. A big plus advantage is installation by our own crews, guaranteeing you a workmanlike job. You deal with one responsible Company for the manufacture and the installation of your intermediate steel windows.

Soulé
LEADER IN METAL WINDOWS

SOULÉ STEEL COMPANY

San Francisco 1750 Army St., VAlencia 4-4141 • **Los Angeles** 6200 Wilmington Ave., LUdlow 5-0911
San Diego 3741 Fifth Ave., CYpress 5-6289 • **Portland** 2630 N.W. St. Helens Rd., CApitol 3-5154
Seattle 4100 W. Marginal Way, HOlly 3600 • **Spokane** 405 American Legion Bldg., MAdison 6000
Phoenix 2026 S. Eleventh Ave., ALpine 3-3178 • **Salt Lake City** 200 Greyhound Bldg., EMpire 3-7601
Dallas 528 Interurban Bldg., Riverside 5225

CATALOGS IN SWEET'S

X750

WATER IS ALWAYS NEWS IN THE WEST

CONGRESS OKAYS HUGE UPPER COLORADO PROJECT

A COMPROMISE version of the Colorado River bill, which authorizes construction of a series of dams on the Upper Colorado River and some of its tributaries, was approved by Congress late in March and was signed into law by President Eisenhower early last month. Since the President had asked for legislation authorizing the project, there was little doubt that he would sign it as passed.

The project, even in its compromise form, will be the country's second largest reclamation program. The original bill called for a considerably larger program which would have cost around $1,500,000,000; the compromise version will cost an estimated $760,000,000.

The program as it now stands consists of four major dams — Glen Canyon on the Colorado in southern Utah (which will combine a large power plant with the storage basin); Flaming Gorge on the Green in southern Wyoming; Curecanti on the Gunnison in Colorado; and Navajo on the San Juan in New Mexico — and 11 irrigation projects. Priority planning for 24 additional irrigation projects in Utah, Wyoming, Colorado and New Mexico is also included. The program will put 132,000 acres of new land under irrigation; at a future date, when priority planning for other projects is put into action, 234,000 additional acres will be under irrigation.

Missing from the compromise program is controversial Echo Park dam, removed from the bill after a bitter fight between reclamationists and conservationists who protested the flooding of a unique wilderness area in Dinosaur National Monument, an area which lies partly in northern Utah and partly in northern Colorado. Elimination of Echo Park reservoir and part of the proposed Curecanti project reduced the storage capacity of the program by enough acre-feet to worry some officials in the affected states but, by and large the passage of the bill, even in its compromise version, was hailed on all sides.

Revenues from the power plants to be built and operated in connection with the dams will be apportioned among the states in the Upper Basin to use in financing their share of the irrigation program.

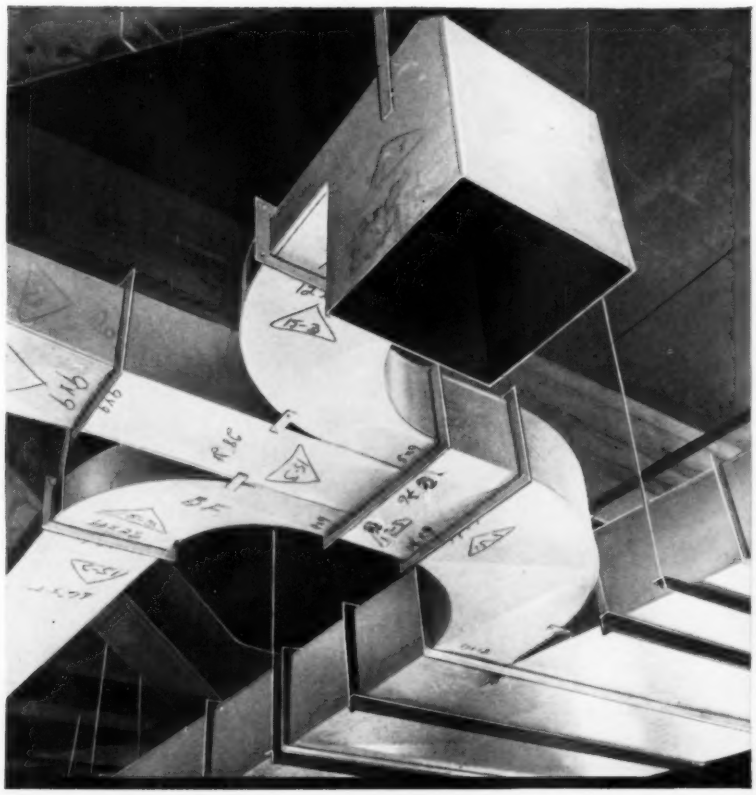
Passage of the bill by Congress did not mean the end of controversy between the Lower Basin states and California which uses Colorado River water under a compact drawn up in 1922. The present bill does not affect delivery of this stipulated amount of water, vital to southern California, especially Los Angeles; but the Supreme Court decision in a suit brought by Arizona against California and seven California water districts may have a grave effect on it. The trial, brought in 1952, got under way in mid-April of this year and promises to be a lengthy legal battle. Losing will come hard, whichever way the trial ends: Arizona is water-hungry because of its scant rainfall per year, and California is water-hungry because of its constantly, and rapidly, increasing population.

CALIFORNIA CREATES STATE WATER DEPARTMENT

A DEPARTMENT of Water Resources for the State of California has been created by action taken in the last hours of the recent budget session of the state's legislature. The bill, which was passed in slightly different form from its original as drawn up by Assemblyman Caspar Weinberger, chairman of the Committee on Government Organization, assures the state of a "modern, integrated and responsible department to provide adequate administration of the state's water resources."

Except for the Colorado River Board (which is involved in litigation just now coming to trial, and so is better off maintaining its independent status), the District Securities Commission and regional water pollution control boards, all major state water agencies have been abolished by the provisions of the bill and their duties are now to be combined in the new department. A director for the department will be appointed by the Governor and will be responsible to the state's chief executive. The new department eliminates considerable overlapping which had inevitably occurred under the old organizational setup.

Particular importance of this action lies in the spectacular growth of the state up to the present time and in the predicted rate of population increase for the next 20 years. In order to provide for the additional millions of persons who are expected to become residents of California, water sources must be developed — and water in the West has always been a number one problem. To remedy this problem various projects are now under consideration, one of which is the gigantic proposal to use the waters of the Feather River in Northern California as a reservoir for supplying the needs of the southern part of the state in particular. This plan includes construction of a dam and reservoir at San Luis, a site which has become a point of controversy between the state of California and the Federal government. The bill which created the Water Resources Department also provides for immediate purchase by the state of the site (a key element in the Feather River project), thereby safeguarding States Rights in regard to control of the site. The Feather River project involves construction of an aqueduct some 700 miles long over a route which at one point means its lifting nearly 4000 ft above sea level as it crosses the Tehachapi Mountains, and a series of dams and reservoirs.



Pinched inside a space 11½ inches deep–

Steel ductwork stands rigid air-conditioning test

The 25-story Equitable Building is San Francisco's newest skyscraper and the city's first office building to be completely air-conditioned. The Scott Nelson Company, Mechanical Contractors, had a job on their hands fitting a duct shape in the 11½-inch furred ceiling space. The problem was to fabricate ductwork flat and narrow, yet rigid enough to withstand constant vibration and pulsation. Adding frame reinforcement to the duct was only part of the answer. The rest depended on the selection of the right metal sheet.

The job required metal properly ductile to form sharply angled, tight seams; yet rigid enough to prevent seams from cracking or opening under the stress of high velocity airflow. The Scott Nelson Company selected steel . . . USS Galvanized Steel Sheets for the job . . . and report the USS sheets did a perfect job.

A unique feature of the Equitable Building's air-conditioning is 1,180 of these air blending units. There is a blender installed in every perimeter office. The units are connected to the central duct system and they act as independent thermostats delivering conditioned air according to an individual's wants.

Free Booklet! AR-5

UNITED STATES STEEL CORPORATION
COLUMBIA-GENEVA STEEL DIVISION
120 MONTGOMERY STREET
SAN FRANCISCO 6, CALIFORNIA

Please send me your free handbook that gives useful information on the production, properties and characteristics of steel sheets.

*Name*_____

*Address*_____

*City*_____ *State*_____

USS Steel Sheets

UNITED STATES STEEL

BONUS BATHROOMS B. N

Twin Lavatories—Doubles Appeal
Today's growing families make this practical convenience a necessity. Easily used with any counter materials.
Porcelain-on-Steel

Better Built and Beautiful
Bathtubs with clean, modern lines, that are full-size, full-height, full-width at no extra cost.
Porcelain-on-Steel

High-fired True Color
Vitreous china with controlled uniformity to its gleaming finish. Easy installation, fool-proof operation.
Vitreous China

Bathrooms are Beauty Rooms
Gleaming color and modern styling i vitreous china lavatories and closet that are high-fired for durability.
Vitreous China

BEAUTIFUL PASTEL SHADES OF PINK, TAN, YELLOW, BLUE, GREEN, AND WHITE

Visit us at the National Plumbing & Heating Exposition, June 11 to 14/Booths #1026-1028-1030, Milwaukee Auditorium, Milwaukee, Wisc.

Bathrooms become beauty rooms with Norris-Thermador Mark of Quality plumbing fixtures. There's a bonus for builder, plumber and owner alike. And there's extra sales appeal in the choice of beautiful pastel shades, extra quality in the porcelain-on-steel and high-fired vitreous china, and extra convenience in the twin pullman lavatories. Bonus Bathrooms by Norris-Thermador sell houses, so plan now to include them as an important selling feature of your next home development. For the *mark of quality* specify and install plumbing fixtures by Norris-Thermador.

NORRIS-THERMADOR

MARK OF QUALITY
NORRIS-THERMADOR Corporation

Color sells kitchens too, and Norris-Thermador offers a full line of kitchen sinks and sink and tray combinations, in the same beautiful pastel shades.

Colorful Kitchen Sinks
With a glass-hard finish so smooth it cleans with plain soap and water, and won't discolor or fade.
Porcelain-on-Steel

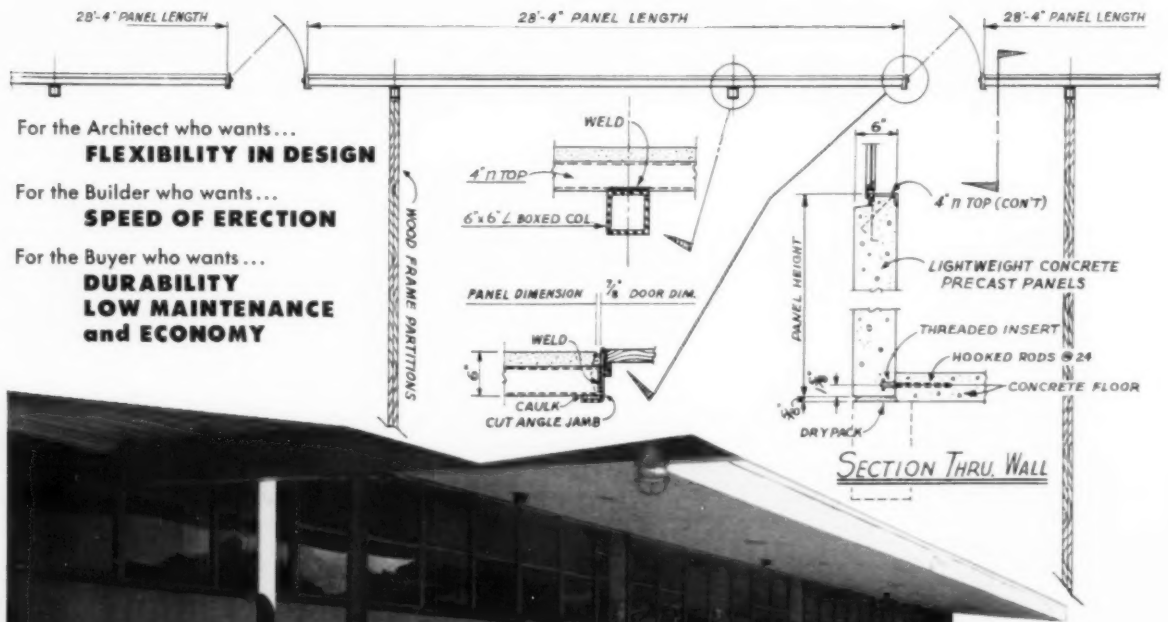
Our products are exhibited in the
NATIONAL HOUSING CENTER
WASHINGTON, D. C.

NORRIS-THERMADOR CORPORATION
Plumbing Fixtures Division
5215 SO. BOYLE AVENUE / LOS ANGELES 58, CALIFORNIA / LUdlow 8-7111
Please send me further information on Norris-Thermador plumbing fixtures.

NAME_____

ADDRESS_____

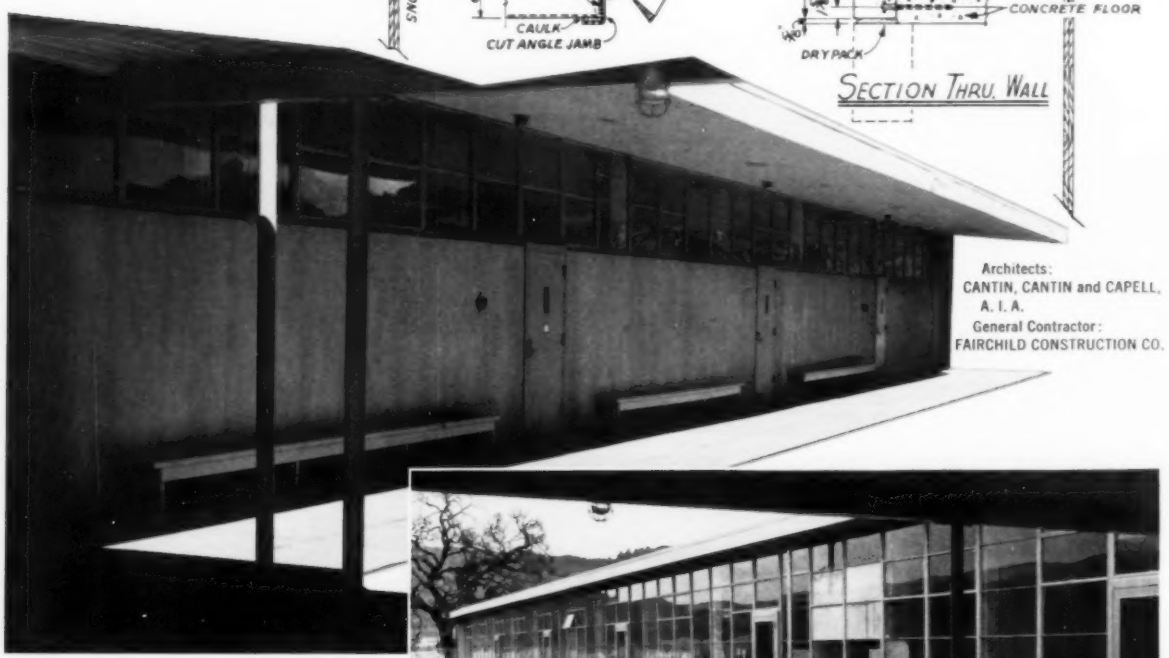
CITY_____ STATE_____



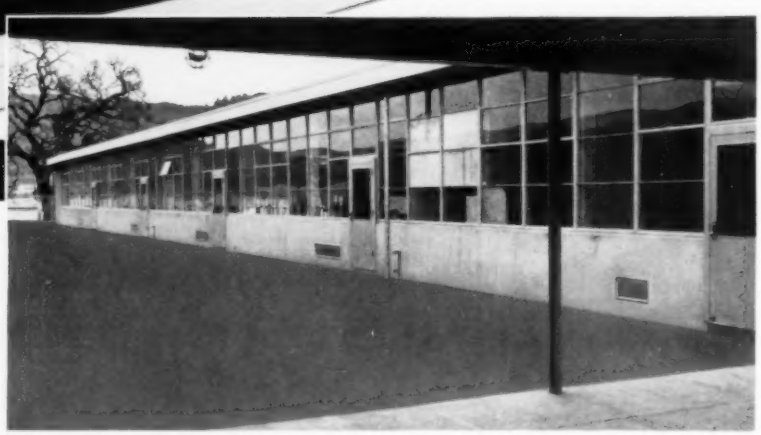
For the Architect who wants...
FLEXIBILITY IN DESIGN

For the Builder who wants...
SPEED OF ERECTION

For the Buyer who wants...
DURABILITY
LOW MAINTENANCE
and ECONOMY



Architects:
CANTIN, CANTIN and CAPELL, A. I. A.
General Contractor:
FAIRCHILD CONSTRUCTION CO.



specify

BASALT PRECAST LIGHTWEIGHT CONCRETE PANELS

The BASALT Precast Concrete Panels at the Oliver P. Hartzell School, San Rafael, California, span from door jamb to door jamb... with no vertical joints to caulk. Panel height is to sill only.

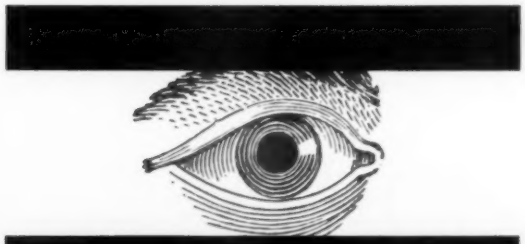
Factory-made panels are precast under rigidly controlled conditions at the BASALT plant in Napa, California, delivered to job in planned sequence. The interior walls are clean and smooth... and the exterior surfaces are textured, attractive... with no finishing required.

BASALT Precast LIGHTWEIGHT CONCRETE PANELS will meet your specifications for strength and dimensional accuracy. *Get complete information* on the versatility of BASALT Precast Prefabricated Concrete Construction before you specify materials for your next job.

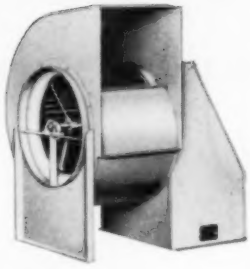
Telephone, wire or write

STRUCTURAL CONCRETE PRODUCTS DIVISION
BASALT ROCK COMPANY, INC.
NAPA, CALIFORNIA • Telephone BAldwin 6-7411

Basalt
CONCRETE PRODUCTS



A NEW LOOK AT "THE FORGOTTEN FAN"



Up on the roof, "the forgotten fan" is out of sight, out of mind . . . until wind, rain, snow and sleet cause costly breakdowns due to exposure and lubrication neglect. In the past when the heart of a blower was broken by weather, there was nothing for it but to repair or replace.

Today, after a searching look at roof blowers, Utility has a more practical answer: a complete line of quality engineered Enclosed Drive Blowers designed for punishing outdoor duty.

Every one has motor and drive completely enclosed for positive protection against dirt, moisture and drastic temperature changes. Permanently sealed, pre-greased ball bearings forever prevent breakdowns due to maintenance neglect.

Best news of all: you pay no premium for this superior performance, due to Utility's progressive production techniques. So, if you think it's high time for a new look at blowers for roof installations, be sure to take a good look at the Utility line . . .

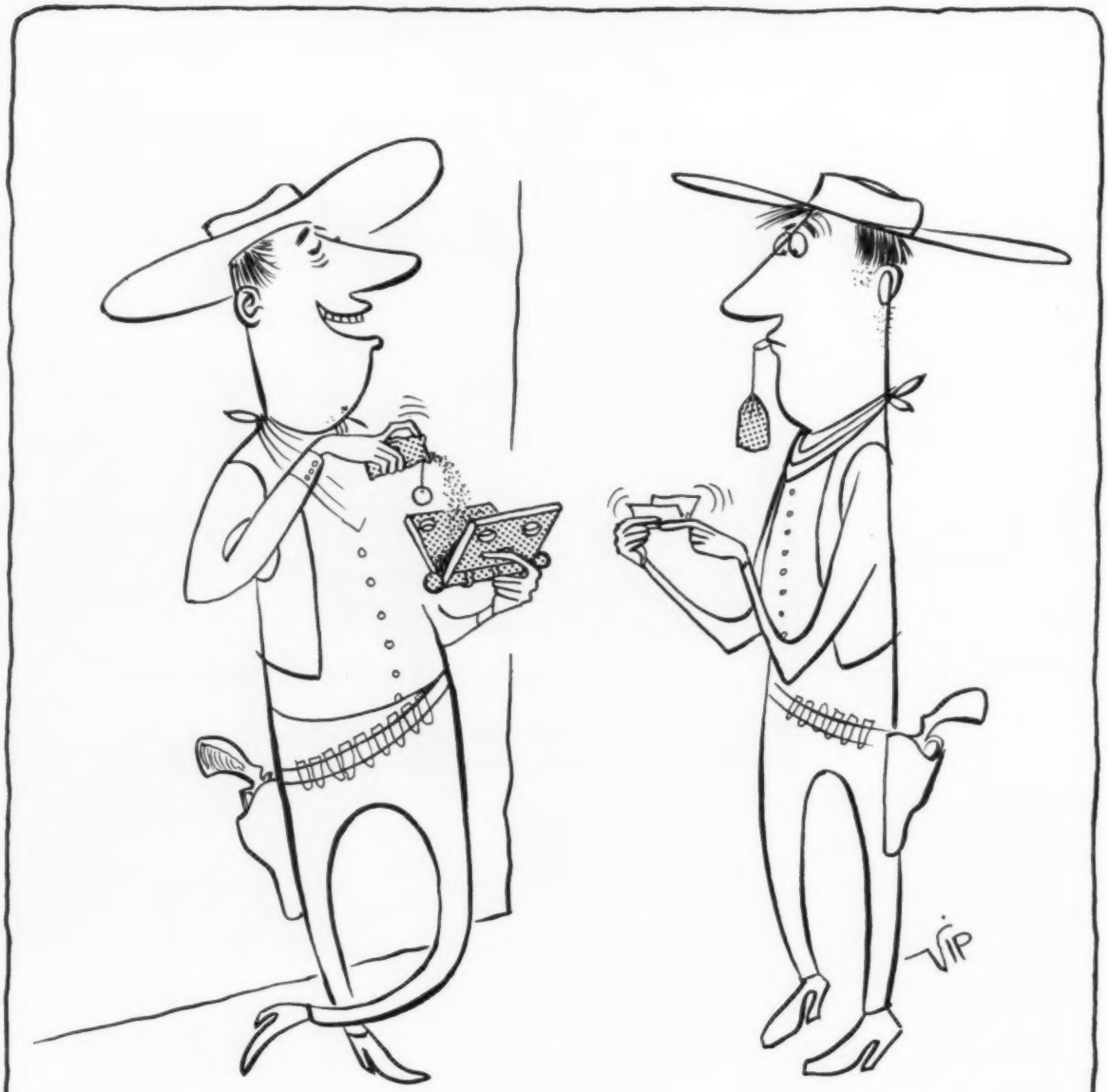
UTILITY

A DIVISION OF UTILITY APPLIANCE CORP.

UTILITY FAN CORP.

911 EAST 59TH STREET, LOS ANGELES 1, CALIFORNIA

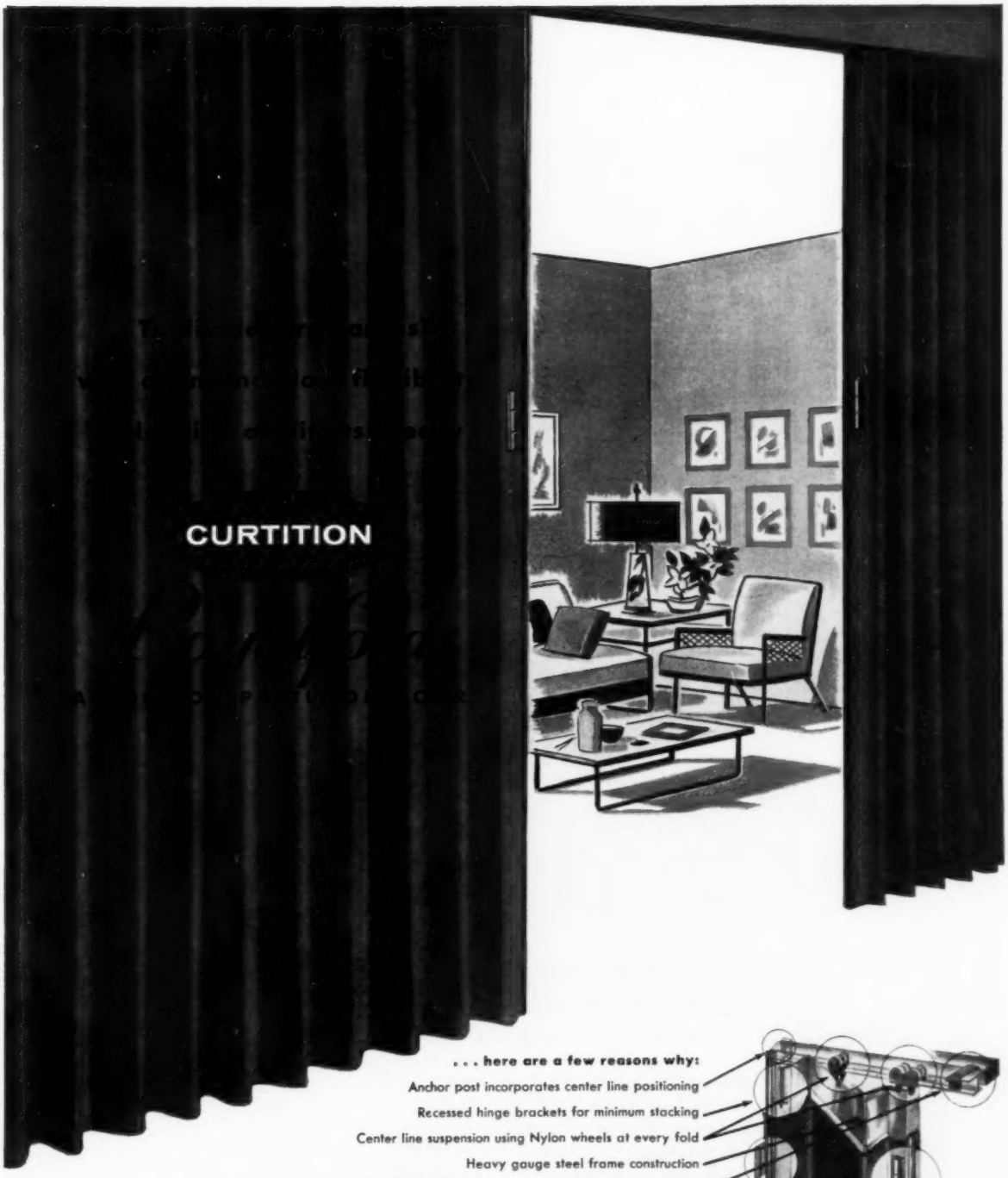
Manufacturers of heavy and standard duty blowers for heating, air conditioning and ventilating installations. Producers of blowers and blower parts for original equipment manufacturers. Write for catalogue data.



"EVERYTHING HINGES ON HAGER!"*

C. Hager & Sons Hinge Mfg. Co. • 139 Victor Street • St. Louis 4, Mo.
Founded 1849—Every Hager Hinge Swings on 100 Years of Experience

HAGER HINGES *®



. . . here are a few reasons why:

Anchor post incorporates center line positioning

Recessed hinge brackets for minimum stacking

Center line suspension using Nylon wheels at every fold

Heavy gauge steel frame construction

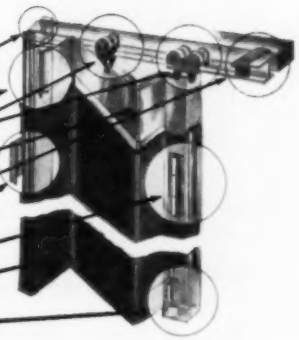
2 Positioning Clips hold door in closed or open position

Anchor post snap locks into secure position — no visible screws

Chrome satin finish hardware

The finest Vinyl coated fabrics, completely washable

Wing-nut adjustment provides accurate positioning of lead post to jamb



Sweet's

Write for our A.I.A. Brochure showing complete details

CURTITION CORPORATION • Dept. AR46, 2227 Sawtelle Boulevard, Los Angeles 64, California

CALIFORNIA CITIES TO GET ATOMIC ELECTRIC POWER

PEACETIME USE of atomic energy will be a reality to some residents of the San Francisco Bay Area when this country's first privately financed atomic electric power will be generated and put to use in the Livermore-Pleasanton area about 40 miles from San Francisco sometime in 1957. In another section of California, the Santa Susanna area, 30 miles northwest of Los Angeles, this peacetime use of the atom will become a reality this summer, when a reactor built by the Atomics International Division of North American Aviation and the Atomic Energy Commission, and operated by Southern California Edison Company, begins to be used.

The site for the Livermore-Pleasanton plant is a 1658-acre plot in a vineyard. On it will be located a radioactive materials laboratory for examination of irradiated materials, a critical experimental facility and a G-E boiling water reactor. General Electric will build the plant and the power produced will be carried over the transmission lines of the Pacific Gas & Electric Company.

Steam for generation of the power will be supplied by an experimental boiling water reactor being built by G-E as a pilot model for a much larger reactor it plans to build in Chicago for operation there with Commonwealth Edison Company beginning in 1960. The Livermore reactor has been designed by a group of scientists and engineers working since last August at the San Jose operating department headquarters of G-E's atomic power equipment department which the company organized to design, develop, manufacture and market atomic equipment for peacetime uses.

The reactor at Livermore is unusual in that it is the first dual-cycle boiling water reactor to be built. (Such a reactor will produce steam at two different pressures, thus making the plant more efficient and also making it possible to adjust automatically the output to meet the varying demands of electricity.) That means that the power to be produced will be the result of a new method, one which Francis McCune, G-E vice president in charge of the atomic products division, says represents "a major advance toward economical production of electricity from nuclear fuel."

GM TO BUILD PLANT AT SUNNYVALE, CALIF.

GENERAL MOTORS' projected new multimillion dollar assembly plant, to be built at Sunnyvale, Calif., just south of Palo Alto and north of San Jose, is the second such plant to be located in the Bay Area within the last two years. The first was the huge Ford plant at Milpitas also in Santa Clara County and only eight miles away on the east side of San Jose. Effect of these developments on the surrounding area will begin to be felt shortly; already real estate values in the Sunnyvale region have started upward. The new plant will employ over 5000 persons.

The site is a 200-acre plot on Bayshore Highway (which connects Sunnyvale direct with San Francisco). Once a horsebreeding farm, this plot is now part of a 2000-acre industrial tract inside the Sunnyvale city limits. Across from it is a subdivision which will eventually have 1000 houses in it.

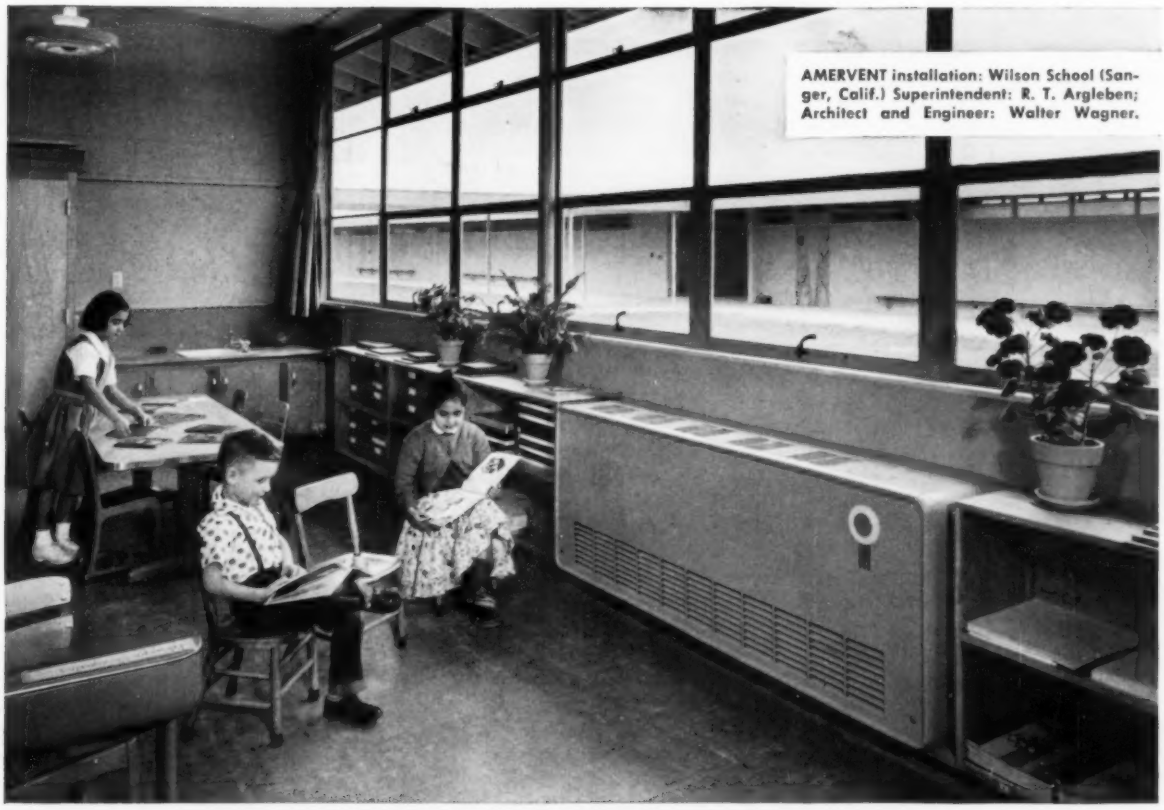
Estimates of the cost of full development of the General Motors plant indicate that this may run as high as $50,000,000 which would make its cost some $10,000,000 greater than that of the Ford plant at Milpitas.

Porcelain ENAMEL
for the building industry

Porcelain Enamel assures outstanding beauty for this modern department store. Even through years of exposure to severe weather and corrosive elements... this glass-hard surface will not fade or deteriorate! Extremely versatile Porcelain Enamel gives architects unlimited means for creative expression—in any color of the spectrum, and virtually any finish! Design *permanent* beauty into your plans... specify Architectural Porcelain Enamel!

Write for detailed information and color chart today!

ARCHITECTURAL DIVISION
PORCELAIN ENAMEL PUBLICITY BUREAU
P. O. BOX 186 • EAST PASADENA STATION • PASADENA 8, CALIFORNIA
1444 WEBSTER STREET • ROOM 4 • OAKLAND 12, CALIFORNIA



AMERVENT installation: Wilson School (Sanger, Calif.) Superintendent: R. T. Argleben; Architect and Engineer: Walter Wagner.

Mild Climate classrooms need *Fresh Air* too!

Amervent built especially for schools in Mild Climate Areas, provides *fresh air cooling, heating* and *ventilating* within the nominal cost of heating alone.

Don't take fresh air for granted. Many classrooms in Mild Climate Areas don't have it. Schools using radiant heat, gas heaters, or any other system that "just heats", are doing without a classroom comfort essential—*fresh air cooling.*

Amervent *does* offer fresh air cooling *plus* heating and ventilating! Provides them automatically, with individual room control.

Cost? Amervent, installed, is within the nominal cost of heating equipment alone!

Amervent's *cost* makes the "heat only" school obsolete. And Amervent's *performance* proves that there's no need to buy "cold climate" units in order to provide the healthful essentials for classroom comfort.

Get the facts on Amervent—the cooling, heating and ventilating unit *designed exclusively* for schools in Mild Climate Areas. Send coupon for bulletin.

AAF herman nelson PRODUCTS

American Air Filter Company, Inc.
System of Classroom Cooling, Heating and Ventilating

HERMAN NELSON PRODUCTS
American Air Filter Company, Inc.
PACIFIC REGIONAL OFFICE, 460 Ninth St., San Francisco

Please send me the bulletin on Amervent cooling, heating, and ventilating units for Mild Climate Areas.

☐ School Official ☐ Architect ☐ Engineer ☐ Other

Name_____

Address_____

City_____ State_____

SACRAMENTO GETS FUNDS FOR URBAN RENEWAL

WHEN URBAN RENEWAL Administrator James W. Follin last month approved a Federal loan of $8,577,420 for redevelopment of Sacramento's blighted West End area — the Capitol Mall project which has been in planning stage since 1949 — the city got into the actual operating phase of its many-million-dollar undertaking. (Plans for this program were reported in the December 1955 Western Section, p. 48–4.)

What makes Sacramento's handling of its urban renewal problem unusual and puts it in the spotlight is the fact that it is the first city in California to take advantage of a provision in the Community Redevelopment Act which makes it possible for the city to issue revenue bonds as a means of financing its part of the cost of redeveloping an area. With the Federal loan, the city can now begin clearing land for resale to private developers and builders.

A capital grant of $3,577,420, approved at the same time as the loan, will take care of the government's share of the expected deficit on the project.

The area scheduled for redevelopment lies between the Capitol and the riverfront, a badly blighted district in which 374 of the 429 existing buildings have been rated substandard. Suggested redevelopment projects for the area include multi-story apartments, commercial buildings, shopping mall, public and semi-public buildings, parking structures and a new hotel. In all some $30,000,000 to $40,000,000 worth of buildings will be built in this section of the city. An esplanade leading from riverfront to Capitol, also a part of the program, will provide a proper setting for California's center of government.

NEW CODE REPLACES S.F.'S NINE-YEAR-OLD LAW

NINE YEARS AGO San Francisco brought its building regulations, which had not been changed in a quarter century despite innumerable technological advances, up to date with a new building code. Last month the city fathers brought it even further up to date when they approved a 1956 code, drawn up after two years' study to conform as nearly as possible with the Uniform Building Code now in use in over 800 cities, many of them in the West.

Unlike older codes which specify that certain materials must be used under certain conditions, the new code sets standards of performance for these elements of the structure; if a material can meet these standards it is presumably acceptable under the code.

The code provides for establishment of a five-man board of examiners to be appointed by the city's public works director with the approval of the city's chief administrative officer. The board will rule on applications for use of new materials or for unusual methods of construction. Its recommendations would be referred to the Bureau of Building Inspections whose superintendent would be empowered to accept them without necessity of amendment to the code.

The two-year job of revising the code was the work of a number of groups whose efforts were coordinated by John S. Bolles, San Francisco architect and member of the Building Industry Conference Board. The section on earthquake safety requirements was worked out by the building code section of the San Francisco Chamber of Commerce under the chairmanship of structural engineer Henry Degenkolb.

Built-in telephone outlets are a big selling point in today's home

says H. J. HARLOW, Jr., Harlow Construction Company, Sacramento, California

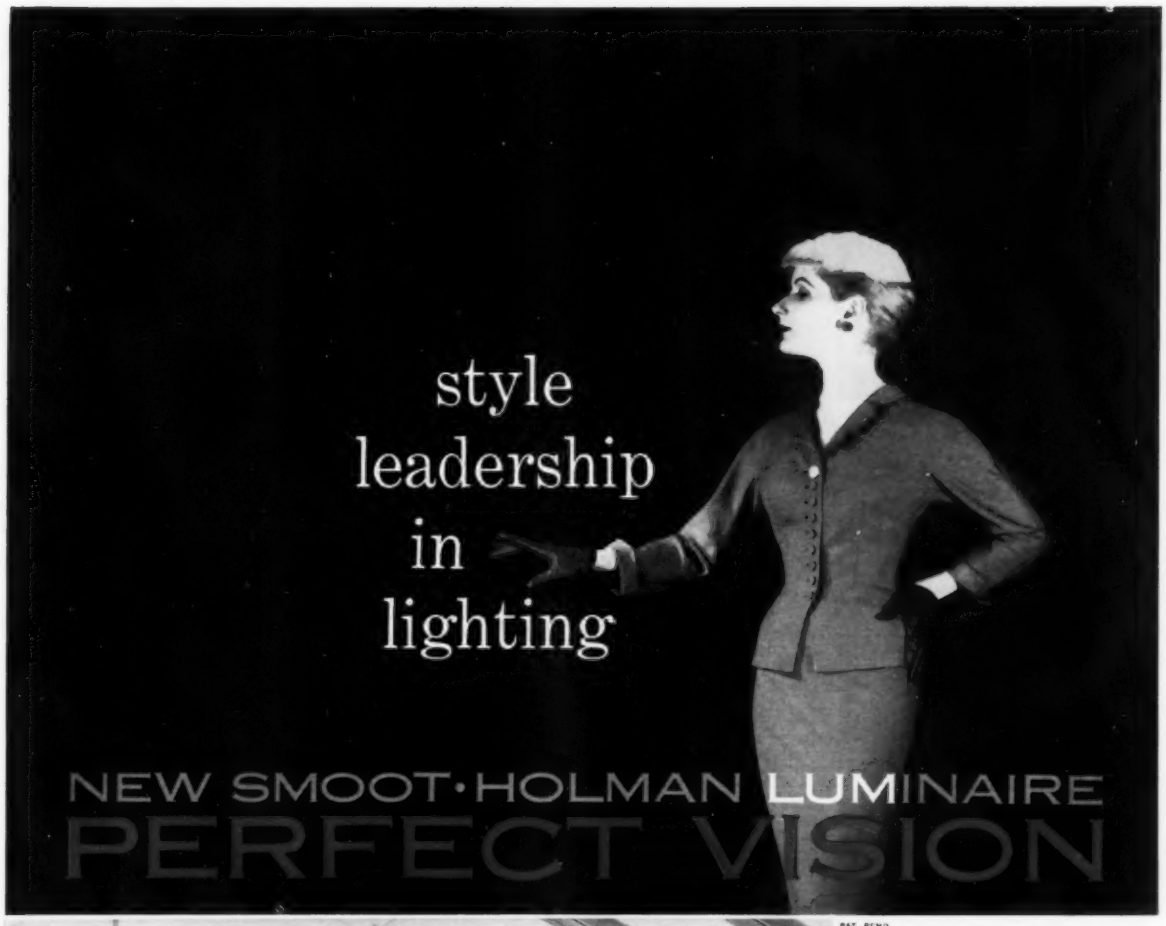
Homes built by the Harlow Construction Company have telephone outlets located for maximum convenience—in rooms where the family spends a lot of time. Concealed telephone wiring is another feature that adds to the livability and value of Harlow homes.

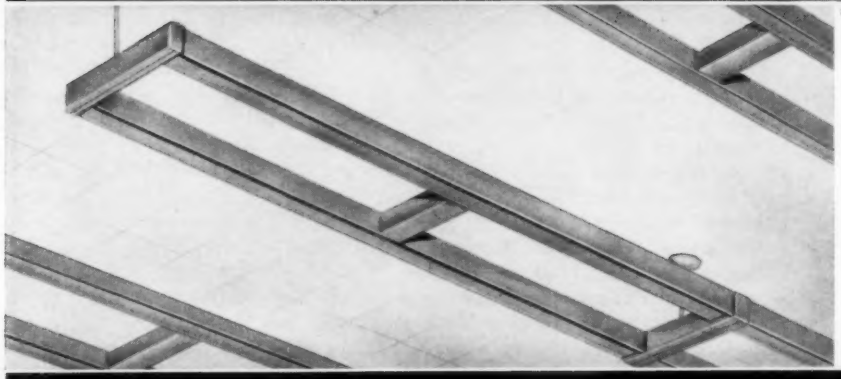
To successful builders like Mr. Harlow, who are setting living standards in the Pacific West, complete telephone planning is as basic as adequate electrical wiring. Pacific Telephone is always ready to help you plan built-in telephone facilities. Just call us and ask for our *free* Architects and Builders Service.

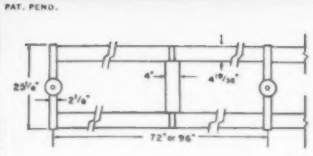
Specify built-in telephone facilities —a sign of good planning

BELL SYSTEM

Pacific Telephone







features:

- Utilizes new 800 MA high output lamps
- May be mounted within 12" of ceiling
- Meets ASA school standards
- High adaptation level with low brightness and brightness ratios
- Flexible in arrangement

Smoot-Holman continues its leadership in lighting with the "new as tomorrow" Perfect Vision indirect luminaire. Here again is Smoot-Holman quality, high efficiency and economy—actually gives *more light per dollar* than ever thought possible.

Investigate the many advantages of this excitingly new, architecturally beautiful luminaire. Contact your local Smoot-Holman office or write direct for Catalog PV-288.

SMOOT-HOLMAN

Inglewood, California

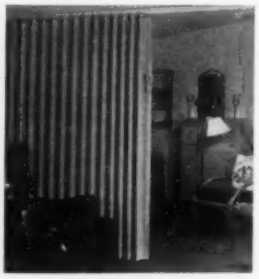
WE SUPPORT THE NATIONAL LIGHTING BUREAU

SERVICE IN THE WEST AND SOUTHWEST FOR ALL SCHOOL, COMMERCIAL AND INDUSTRIAL LIGHTING

MODERNFOLD DOORS increase usable space in - - - - -

Southern California
BUILDINGS FOR
THE AGED

Sound-insulating feature of Modernfold construction permits use of dining hall and main lounge areas without disturbance



Room-mates in cottage can close off sleeping area from living room when privacy is required

An Inside Look At Modernfold Quality

Exclusive "X" double hinge construction gives double strength at bottom and top . . . more vertical steel rods . . . vertical rods welded to hinges. These are only three important quality features offered by Modernfold.

Write or phone for information today

MODERNFOLD DOORS, INC.
Exclusive Distributor
3836 East Foothill Boulevard
Pasadena 8, Calif. RYan 1-5185

modernfold ®

WASTE SPACE

An Architecture of Light

What was it Moholy-Nagy said about an "architecture of light?" As long ago as 1936 he spoke of it; even then he felt that the technology of the 20th Century had provided the means (polarization and spectroscopy were what he had in mind) toward replacing "the old two-dimensional color patterns by a monumental architecture of light." He was thinking in terms of light that would "flood the air — vast halls, or reflectors, of unusual substance — such as fog, gaseous materials or clouds, with brilliant visions of multi-colored light." He wanted to combine the effect of changing colored light with the reflective surfaces of many kinds of materials (he mentioned specifically galalith, chromium, nickel, trolit) whose movements would express "the basic rhythm of this fully orchestrated symphony of light." He wanted to create a "monumental fresco of light"; he wanted to "animate the white emptiness of a bare room" with just 12 projectors. But he knew that there was small chance that these visions of his would take concrete form at any early date; nevertheless, it was his conviction that even then (1936) it was possible "to envisage the basic system of the future architecture of light."

In the 20 years that have elapsed since Moholy-Nagy wrote these words technology has made tremendous advances — but has the use of technology in respect to "an architecture of light" made similar advances?

All this came to mind recently because of a program called "Light for Living" at the regional meeting of the Pacific Coast Section of the Illuminating Engineers Society held in San Francisco last month. Three speakers emphasized the challenge and the problem of using artificial light: Walter Doty of *Sunset* Magazine pointed out that lighting is the tool for creating poetry — or mood — in the enclosures we call architecture; architect Robert Anshen recalled the interdependence of light *and* shadow *and* darkness; landscape architect Lawrence Halprin called attention to the fact that outdoor lighting too often indulges in "stagey-ness"; instead of giving depth, it puts everything into one plane and robs it of "mood."

That the engineers included such a program on their convention schedule showed that they are eager for cooperation from the designing genius of architects; what the architects had to say indicated that they were willing. Perhaps the "architecture of light" isn't so far away, after all. At any rate, it need not be: it's a matter of a common goal. Not just greater intensity of light (which in excess of zeal the home-lighting "expert" has given us) but light as a creative factor in design. The sun's light at high noon has a great intensity, but man habitually hides himself, one way and another, from it; it is the *qualified* light of earlier or later moments of the day which he enjoys. Sun *and* shadow; life *and* poetry: there's a common goal.

All Great Art Is Sad

Talking with gold-medalist Bernard Maybeck is a never-to-be-forgotten experience. At 93, his comments on architecture are more penetrating, more beautifully expressed than those of most of today's "critics." A few weeks ago architect Bill Rice of the University of California Radiation Laboratory, playing host in Berkeley to other members of the A.I.A.'s national committee on Nuclear Facilities (Charles Haines of New York, Alexander Mackintosh of Boston, Eric Pawley of the Octagon staff), took them up to see Maybeck.

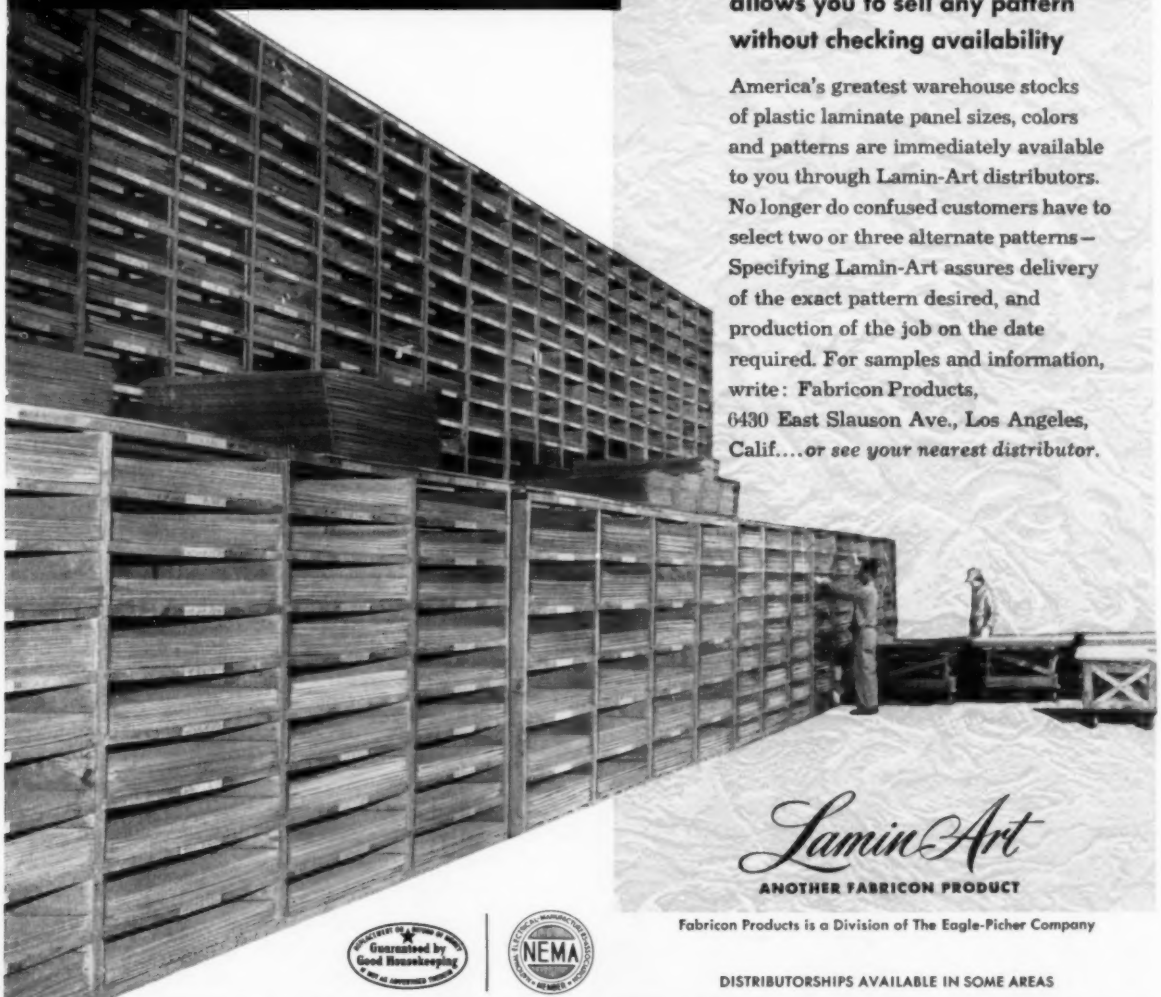
Asked about the figures on his Palace of Fine Arts, crumbling relic of San Francisco's 1915 Exposition, Maybeck explained: Instead of being turned inward, toward the great urns over which they bend, he might have made them turn outward, hailing the crowds of gay visitors. But the building was to house paintings and sculpture — the great works of art borrowed from Europe.

"All great art is sad," said Maybeck, "and it would have been wrong to have made those figures express joy when they symbolized, in a sense, the purpose of the building. That is why their attitude is sorrowful; the curve of their bodies tells the nature of the works to be seen within the building."

All great art is sad — "sad" because to be great it must see through the surface of life to the essential yearning of the human soul and then must communicate something beyond the ordinary experience of man. This is as true for architecture as it is for painting and sculpture: architecture goes beyond the every-day or it remains four-walls-and-a-roof.

— E.K.T.

Lamin-Art plastic surfacing GIVES YOU MORE*



*immediate availability

4½ million sq. ft. stock allows you to sell any pattern without checking availability

America's greatest warehouse stocks of plastic laminate panel sizes, colors and patterns are immediately available to you through Lamin-Art distributors. No longer do confused customers have to select two or three alternate patterns—Specifying Lamin-Art assures delivery of the exact pattern desired, and production of the job on the date required. For samples and information, write: Fabricon Products, 6430 East Slauson Ave., Los Angeles, Calif....*or see your nearest distributor.*

Lamin-Art
ANOTHER FABRICON PRODUCT

Guaranteed by Good Housekeeping

NEMA

Fabricon Products is a Division of The Eagle-Picher Company

DISTRIBUTORSHIPS AVAILABLE IN SOME AREAS

LAMIN-ART IS STOCKED BY THESE DISTRIBUTORS:

A & S DISTRIBUTING CO.
Dallas, Texas
SIMSCO, INC.
Houston—San Antonio, Texas
GEORGE C. VAUGHAN & SONS
Houston—Nederland, Texas
E. D. BATT & CO.
Phoenix, Arizona
B & B DISTRIBUTORS, INC.
Denver, Colorado
ROBISON DISTRIBUTING CO.
Salt Lake City, Utah
E. B. BRADLEY CO.
Los Angeles, California
E. B. BRADLEY CO.
San Francisco, California
CHARLES McMURRAY CO.
Fresno, California
WILSON F. CLARK CO.
San Diego, California

SACRAMENTO CABINET SUPPLY
Sacramento, California
E. B. BRADLEY CO.
Seattle, Washington
CASCADE SALES CO.
Seattle, Washington
CASCADE SALES CO.
Portland, Oregon
DURA-TRIM METALS CO.
Cleveland, Ohio
AL STRACHAN CO.
Columbus, Ohio
PIERSON-LEWIS
Indianapolis, Indiana
SMITH PLYWOOD
Elkhart, Indiana
HOME TILE & EQUIPMENT CO.
Mobile, Alabama
SOUTHERN FLOORING CO.
Birmingham, Alabama

KENNEDY'S TILE
New Orleans, Louisiana
MONROE BRICK & BLDRS. SUPPLY
Monroe, Louisiana
TOPCO PRODUCTS, INC.
Miami, Florida
MAY SUPPLY CO.
Little Rock, Arkansas
ORTNER'S CABINET
Oklahoma City, Oklahoma
EXPORT
C. A. GARDINER CO.
North Hollywood, California
PACIFIC LUMBER CO.
Honolulu, T. H.
OLIMPIA PRODUCTS
Los Angeles, California
EJA S. de R. L. C. V.
Mexico City, Mexico
MARCHINA Y CIA S. A.
Guadalajara, Jalisco, Mexico

PROFESSIONAL NEWS

Summer Jobs for Students

A placement bureau to provide actual job experience for architectural students during summer vacations is being sponsored by the education committees of the Northern California and East Bay Chapters, A.I.A., and the Job Opportunities committee of the College of Architecture, University of California. The program is designed to produce graduates who have had some practical experience so as to minimize the adjustment period for both employer and employe after the latter's graduation. Although the committees emphasize in-office training for upper classmen in drafting, rendering, detailing and similar phases of office routine, the objective is to give every student some office experience during his college training. Architects who have summer openings and who are interested in participating in this program can contact members of any of the committees for further information.

UCLA Offers Solar Energy Course

A course on the "Utilization of Solar Energy" is being given this spring at the University of California at Los Angeles with 10 solar energy authorities participating in the series of 12 lectures which constitute the course. Dr. A. M. Zarem, visiting professor of engineering at UCLA is coordinator for the course.

Main objective in offering the course is to attract students to this field of study. The course will give special attention to the technical and economic problems in the application of solar energy in the chemical, electronic and general research fields.

CALENDAR OF WESTERN EVENTS

• May 15–18: 88th Annual Convention, American Institute of Architects, Hotel Biltmore, Los Angeles

• June 13–July 12: Chrysler Art Collection, Palace of the Legion of Honor, San Francisco

• June 12–16: World Conference on Earthquake Engineering, University of California, Berkeley

June 14–24: Construction Industries Exposition and Home Show, Pan Pacific Auditorium, Los Angeles

• June 16: "San Francisco Discovery": Photographs by Bay Area photographers. M. H. DeYoung Memorial Museum, Golden Gate Park, San Francisco

• June 18–August 10: Summer Session in Architecture and the Allied Arts, University of Oregon, Eugene

• October 10–14: California Council of Architects Annual Convention and California-Hawaii-Nevada Regional Conference, Yosemite National Park

• October 11–13: Annual Convention, Structural Engineers Association of California, Reno, Nevada

• October 18–20: Western Mountain Region, A.I.A., Annual Convention, Salt Lake City

Sanymetal®
TOILET
COMPARTMENTS
ARE ALSO MADE IN
The West!
Because Sanymetal now has a complete manufacturing plant located in Los Angeles, Sanymetal's extra quality comes to you at no penalty in service, or freight cost. For more information about Sanymetal quality see page 61
Sanymetal Products Co., Inc.
Factory at 6433A E. Canning St.,
LOS ANGELES 22

WESTERN SECTION

INDEX TO ADVERTISING

MANUFACTURERS' PRE-FILED CATALOGS

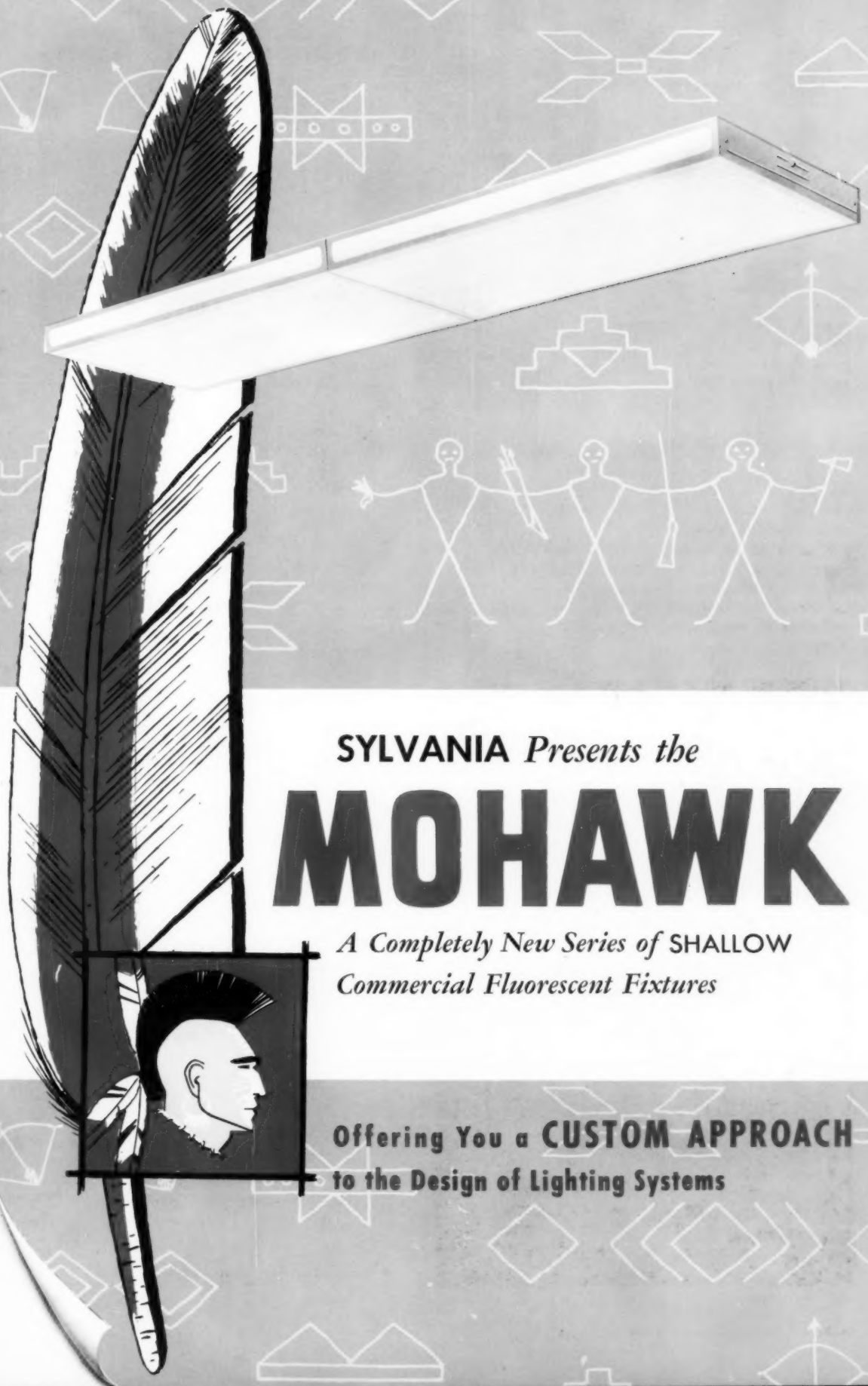
Catalogs of the firms listed below are available in the 1956 Sweet's Catalog Files as follows:

a — Architectural File (green)
ic — Industrial Construction File (blue)
lc — Light Construction File (yellow)

	American Air Filter Co. Inc.	48-19
	Basalt Rock Co., Inc.	48-14
	Columbia Geneva Steel Division	48-11
a	Curtition Corporation	48-17
a	Fabricon Products	48-23
	Gladding-McBean & Co.	48-8
	Hager, C. & Sons Hinge Mfg. Co.	48-16
a	Minnesota Mining & Mfg. Co.	48-5
	Modernfold Doors, Inc.	48-22
	Nelson Herman Division	48-19
	Norris-Thermador Corporation	48-12-13
	Pacific Tel. & Tel. Co.	48-20
	Palos Verdes Stone Inc.	48-6
	Porcelain Enamel Publicity Bureau	48-18
a-ic	Sanymetal Products Co., Inc.	48-24
	Smoot-Holman Company	48-21
	Soule Steel Company	48-9
a-ic	Sunbeam Lighting Company	48-7
	United States Steel Corporation	48-11
	Utility Fan Corp.	48-15

Western advertising offices: LOS ANGELES, Bob Wettstein, 672 S. Lafayette Park Pl.; PORTLAND, Bob Wettstein, 921 S. W. Washington St.; SAN FRANCISCO, Bob Wettstein, Howard Bldg., 209 Post St.

A.I.A. 31-F-2



SYLVANIA *Presents the*

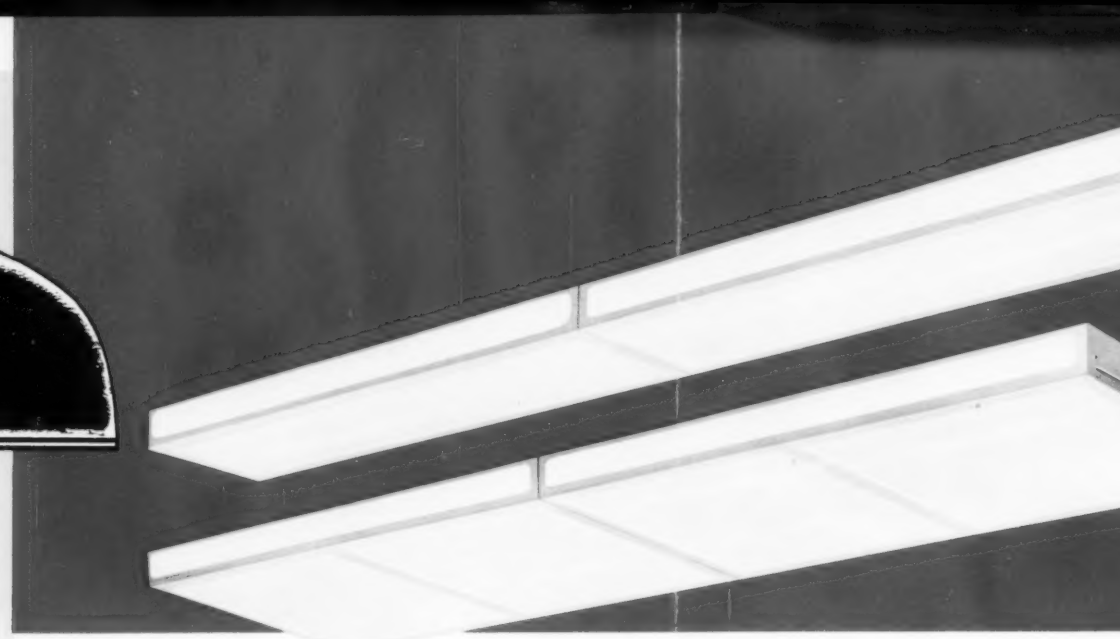
MOHAWK

A Completely New Series of SHALLOW
Commercial Fluorescent Fixtures

Offering You a CUSTOM APPROACH
to the Design of Lighting Systems

A.I.A. 31-F-2

Complete Versatility with these 4 types of shielding



Sylvania MOHAWK with Low Brightness

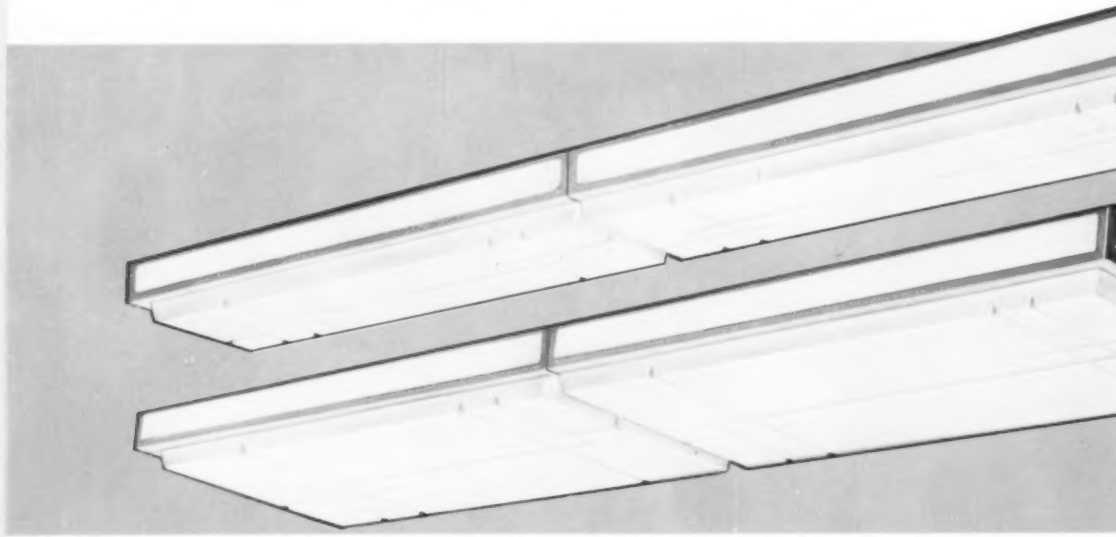
THE CHIEF . . . 13⅜" WIDTH

MG-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
MG-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
MG-2968-IS	8-ft.	Two 75-watt Instant Start Lamps

THE SUPER CHIEF . . . 23¾" WIDTH

MG-4404-RS	4-ft.	Four 40-watt Rapid Start Lamps
MG-6404-RS	4-ft.	Six 40-watt Rapid Start Lamps
MG-4968-IS	8-ft.	Four 75-watt Instant Start Lamps
MG-6968-IS	8-ft.	Six 75-watt Instant Start Lamps

Corning #70 Low Brightness L glassware is used for these Mo outstanding quality of the illumi — plus its pleasing appearance — Mohawk shielding especially suite and public buildings. The #70 Le brightness by the principle of pris — while at the same time it de amount of light.



Sylvania MOHAWK with Dished Plastic P

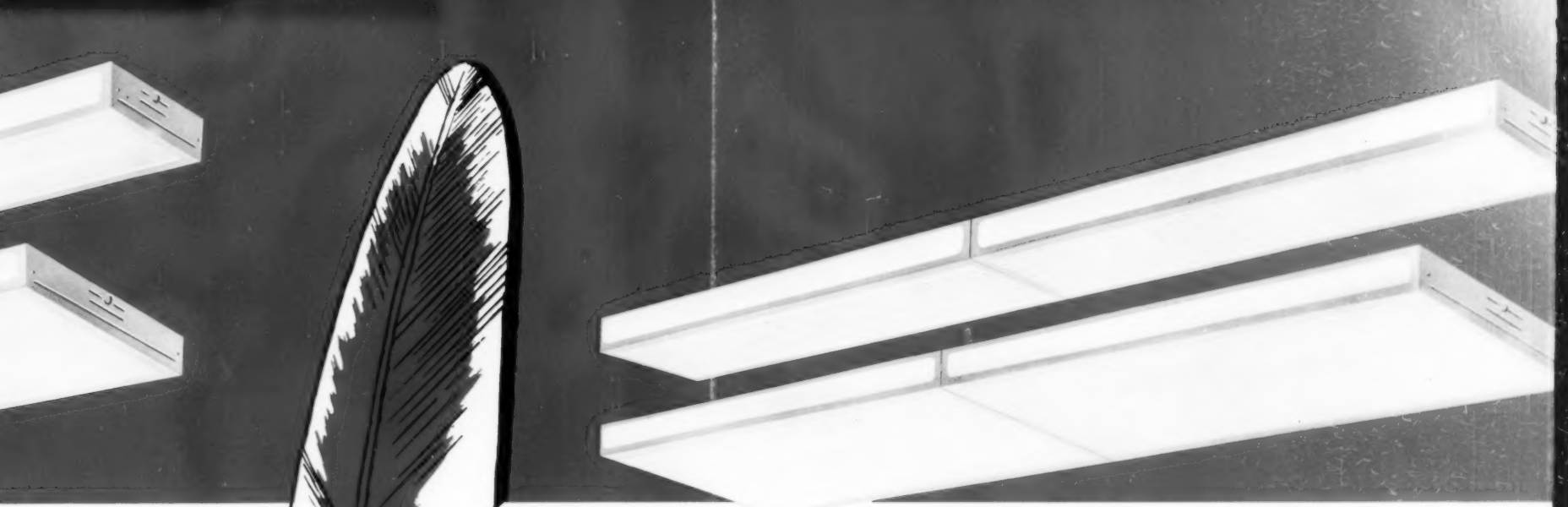
THE CHIEF . . . 13⅜" WIDTH

MP-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
MP-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
MP-2968-IS	8-ft.	Two 75-watt Instant Start Lamps

THE SUPER CHIEF . . . 23¾" WIDTH

MP-4404-RS	4-ft.	Four 40-watt Rapid Start Lamps
MP-6404-RS	4-ft.	Six 40-watt Rapid Start Lamps
MP-4968-IS	8-ft.	Four 75-watt Instant Start Lamps
MP-6968-IS	8-ft.	Six 75-watt Instant Start Lamps

Particularly suitable for general conference rooms and other are glare is a problem. The vacuum-f shielding used for these Mohaw low brightness in the direct gla distribution and good diffusion. with its modular pattern harmon ern interiors.



ess Lens

ness Lens of engineered e Mohawk fixtures. The illumination it produces nce — makes this type of suited to offices, schools :70 Lens reduces surface of prismatic light control it delivers a maximum

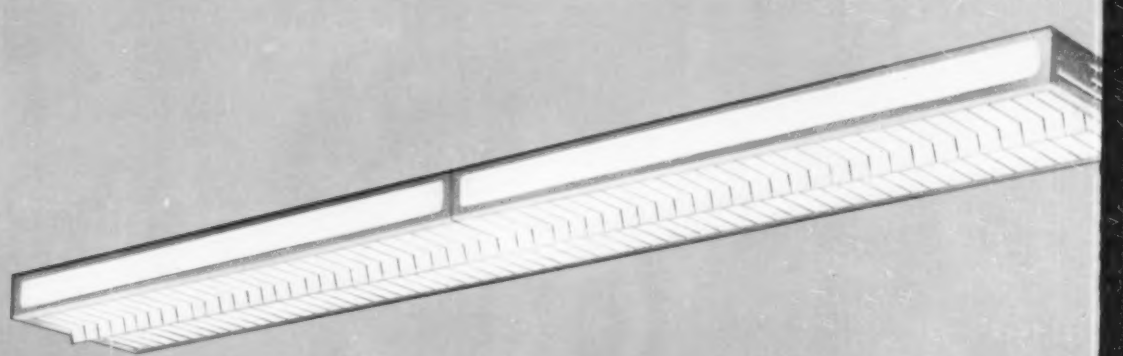
c Panel

neral and private offices, er areas where reflected uum-formed Vinyl plastic Mohawk fixtures provides ct glare zone with wide sion. The dished contour armonizes well with mod-

Sylvania MOHAWK with Plastic Louvers

THE CHIEF . . . 13⅜" WIDTH		
MPL-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
MPL-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
MPL-2968-IS	8-ft.	Two 75-watt Instant Start Lamps
THE SUPER CHIEF . . . 23¾" WIDTH		
MPL-4404-RS	4-ft.	Four 40-watt Rapid Start Lamps
MPL-6404-RS	4-ft.	Six 40-watt Rapid Start Lamps
MPL-4968-IS	8-ft.	Four 75-watt Instant Start Lamps
MPL-6968-IS	8-ft.	Six 75-watt Instant Start Lamps

An excellent choice for fashion-conscious shops and other interiors where distinctive appearan portant. Plastic louvers of high temperature po give an attractive luminous appearance to this Mohawk shielding. Its ⅝-inch square cells provi 43° shielding for comfortable glare-free seeing.

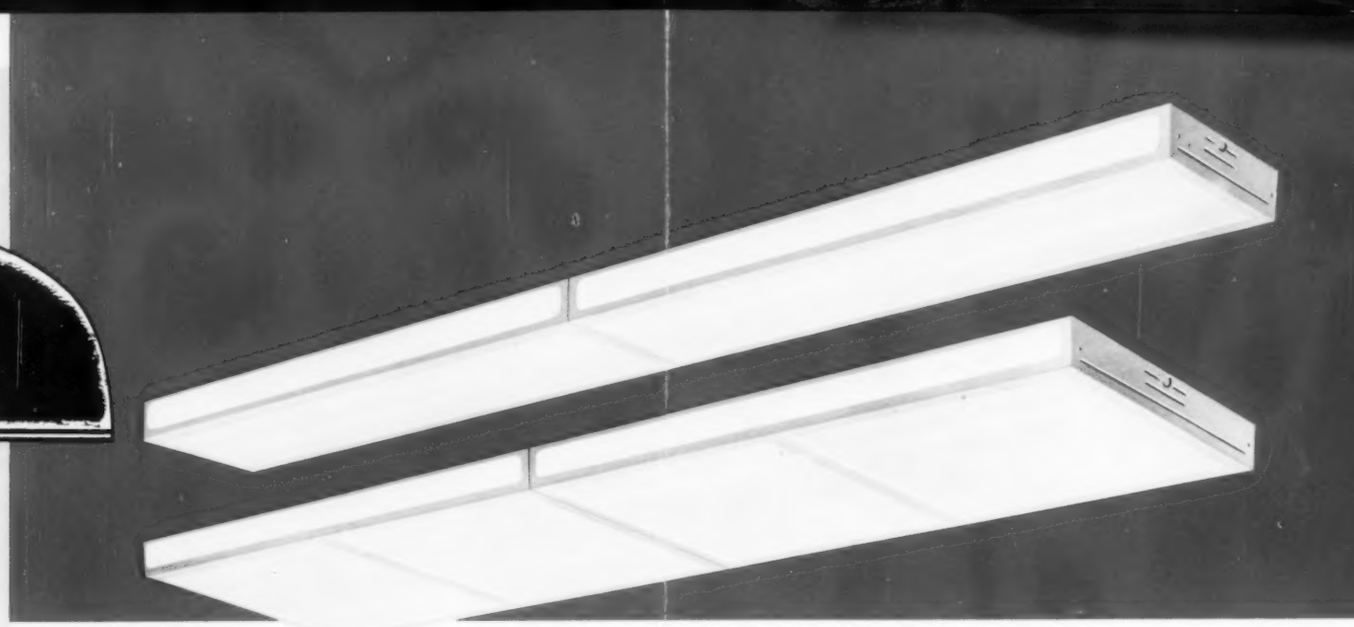


Sylvania MOHAWK with Metal Louvers

THE CHIEF . . . 13⅜" WIDTH ONLY		
ML-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
ML-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
ML-2968-IS	8-ft.	Two 75-watt Instant Start Lamps

In this version of the Mohawk Series, the met are hinged with snap-in spring latches. Const special grade 20-gauge hardened steel, the louve 35° lengthwise and 45° crosswise shielding. schools, general office areas, stores or where direct illumination is desired.

Complete Versatility with these 4 types of shielding



Sylvania MOHAWK with Low Brightness Lens

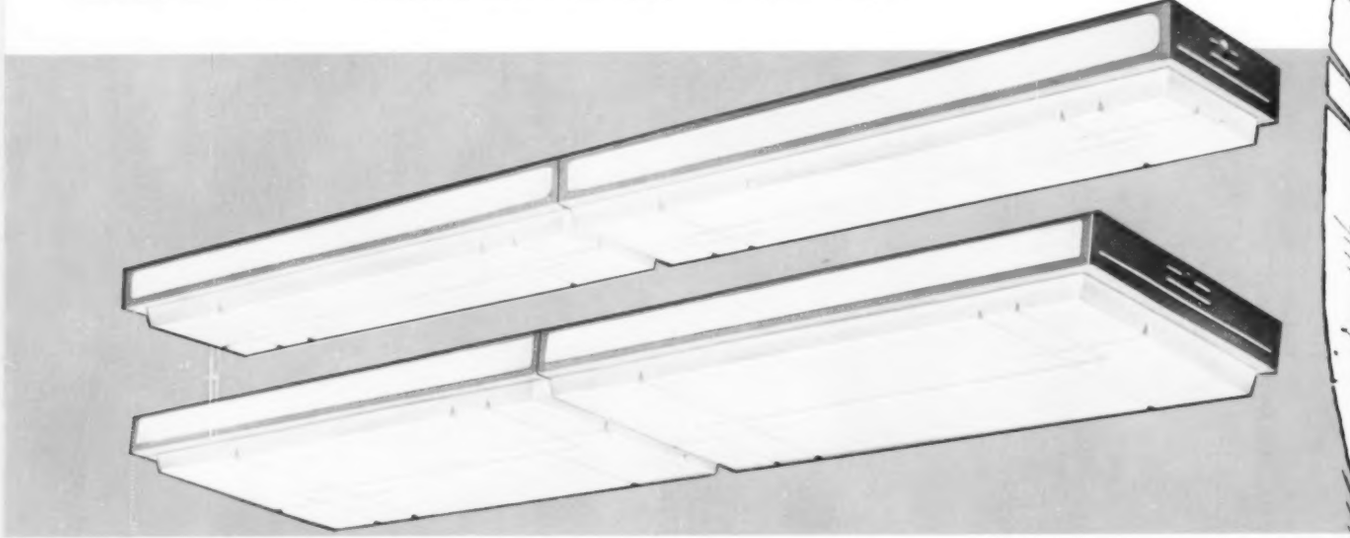
THE CHIEF . . . 13⅜" WIDTH

MG-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
MG-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
MG-2968-IS	8-ft.	Two 75-watt Instant Start Lamps

THE SUPER CHIEF . . . 23¾" WIDTH

MG-4404-RS	4-ft.	Four 40-watt Rapid Start Lamps
MG-6404-RS	4-ft.	Six 40-watt Rapid Start Lamps
MG-4968-IS	8-ft.	Four 75-watt Instant Start Lamps
MG-6968-IS	8-ft.	Six 75-watt Instant Start Lamps

Corning #70 Low Brightness Lens of engineered glassware is used for these Mohawk fixtures. The outstanding quality of the illumination it produces — plus its pleasing appearance — makes this type of Mohawk shielding especially suited to offices, schools and public buildings. The #70 Lens reduces surface brightness by the principle of prismatic light control — while at the same time it delivers a maximum amount of light.



Sylvania MOHAWK with Dished Plastic Panel

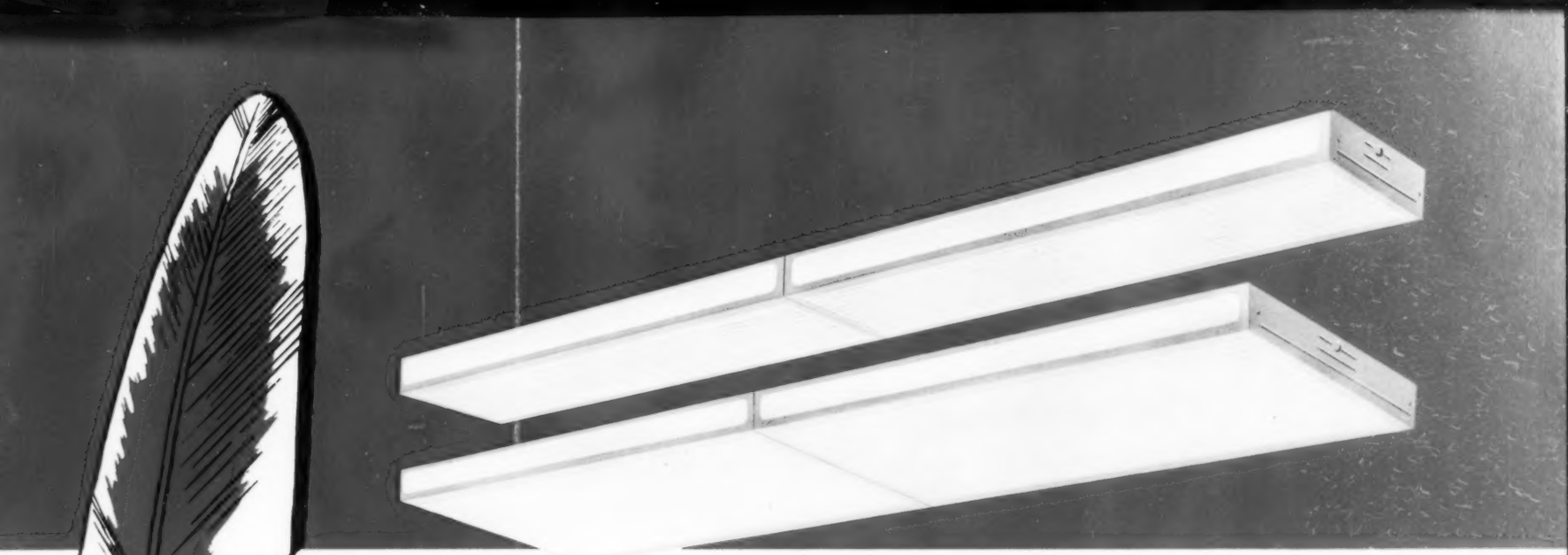
THE CHIEF . . . 13⅜" WIDTH

MP-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
MP-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
MP-2968-IS	8-ft.	Two 75-watt Instant Start Lamps

THE SUPER CHIEF . . . 23¾" WIDTH

MP-4404-RS	4-ft.	Four 40-watt Rapid Start Lamps
MP-6404-RS	4-ft.	Six 40-watt Rapid Start Lamps
MP-4968-IS	8-ft.	Four 75-watt Instant Start Lamps
MP-6968-IS	8-ft.	Six 75-watt Instant Start Lamps

Particularly suitable for general and private offices, conference rooms and other areas where reflected glare is a problem. The vacuum-formed Vinyl plastic shielding used for these Mohawk fixtures provides low brightness in the direct glare zone with wide distribution and good diffusion. The dished contour with its modular pattern harmonizes well with modern interiors.



Sylvania MOHAWK with Plastic Louvers

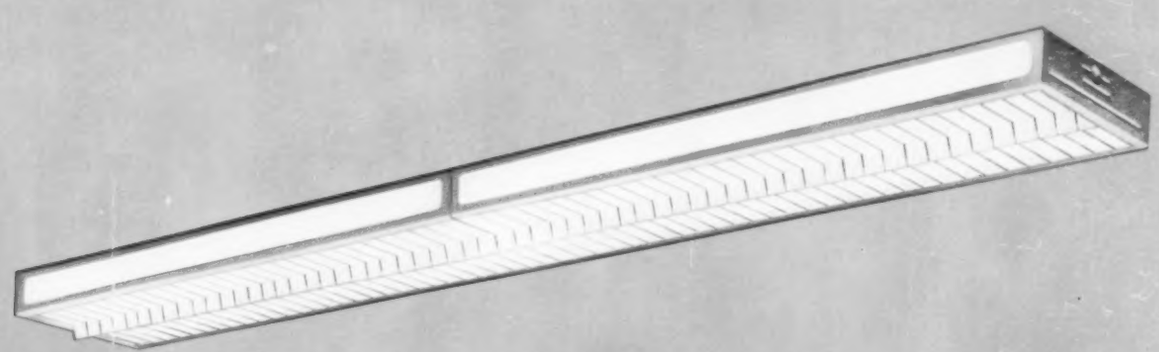
THE CHIEF . . . 13⅜" WIDTH

MPL-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
MPL-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
MPL-2968-IS	8-ft.	Two 75-watt Instant Start Lamps

THE SUPER CHIEF . . . 23¾" WIDTH

MPL-4404-RS	4-ft.	Four 40-watt Rapid Start Lamps
MPL-6404-RS	4-ft.	Six 40-watt Rapid Start Lamps
MPL-4968-IS	8-ft.	Four 75-watt Instant Start Lamps
MPL-6968-IS	8-ft.	Six 75-watt Instant Start Lamps

An excellent choice for fashion-conscious shops, lobbies and other interiors where distinctive appearance is important. Plastic louvers of high temperature polystyrene give an attractive luminous appearance to this type of Mohawk shielding. Its ⅝-inch square cells provide 43° x 43° shielding for comfortable glare-free seeing.

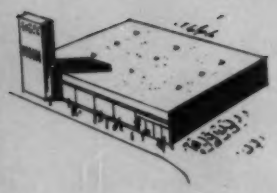


Sylvania MOHAWK with Metal Louvers

THE CHIEF . . . 13⅜" WIDTH ONLY

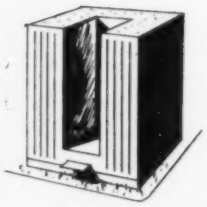
ML-2404-RS	4-ft.	Two 40-watt Rapid Start Lamps
ML-4408-RS	8-ft.	Four 40-watt Rapid Start Lamps
ML-2968-IS	8-ft.	Two 75-watt Instant Start Lamps

In this version of the Mohawk Series, the metal louvers are hinged with snap-in spring latches. Constructed of special grade 20-gauge hardened steel, the louvers provide 35° lengthwise and 45° crosswise shielding. Ideal for schools, general office areas, stores or wherever more direct illumination is desired.



STORES

SCHOOLS



OFFICES

SYLVANIA'S NEW

MOHAWK SERIES

Offers you complete FLEXIBILITY OF DESIGN

- *The Mohawk's distinctive shallow styling blends attractively with today's low ceilings.*
- *The Mohawk's variety of shielding meets any brightness requirement.*
- *Installation is simple and maintenance is a low-cost item due to wrap-around body and hinged shield-frame.*
- *The Mohawk offers a variety of models to meet all room proportions.*
- *Any practical lighting level can be reached with 2, 4 or 6 lamp styles.*
- *Versatility of the Mohawk makes it suitable for mounting individually, in continuous rows or in patterns.*

Here's what architects and lighting engineers have been asking for — *a lighting system designed for the designer!* The Mohawk Series combines distinctive, truly shallow fixtures needed for modern low ceilings with the wide versatility required for complete freedom of expression.

The Mohawk Series offers 24 different types to work with . . . four shielding types to choose from . . . 2, 4 or 6 lamps in cross-section to meet any lighting level . . . two different widths to correspond with room proportions . . . and, of course, 4′ and 8′ lengths with rapid or instant start series ballasts to meet individual requirements.

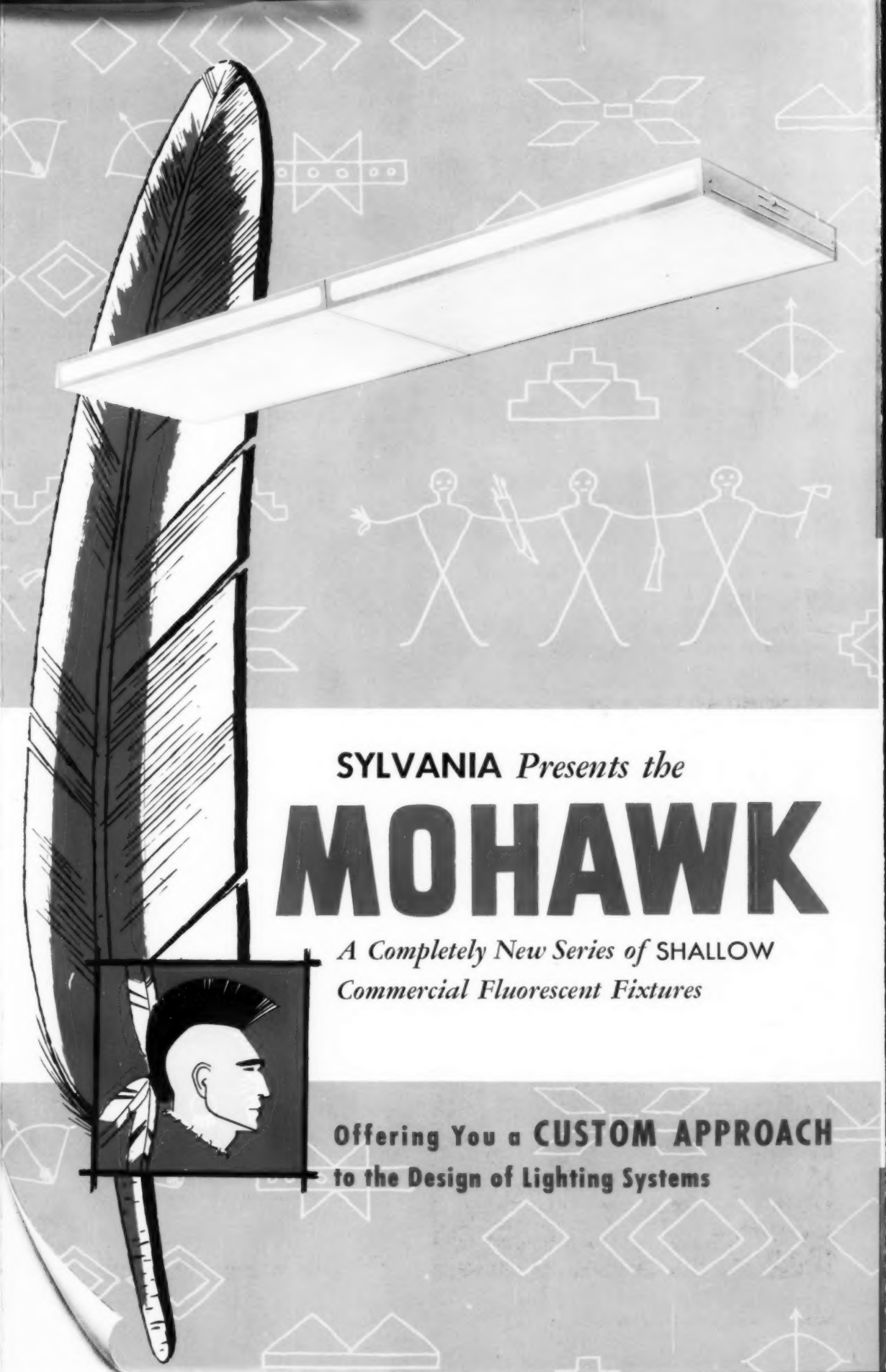
Luminous plastic side panels in all Mohawk models give added beauty and provide reduced contrasts. A special formula of extruded high-temperature polystyrene produces the desired result of luminous sides with controlled brightness.

Sylvania's new Mohawk Series is the most complete line of commercial fixtures of this type in the industry. With these fixtures you can create distinguished lighting for an endless variety of modern interiors by mounting individually, in continuous rows, or in patterns to blend with architectural design.

PUBLIC BUILDINGS

LOBBIES

CONFERENCE ROOMS

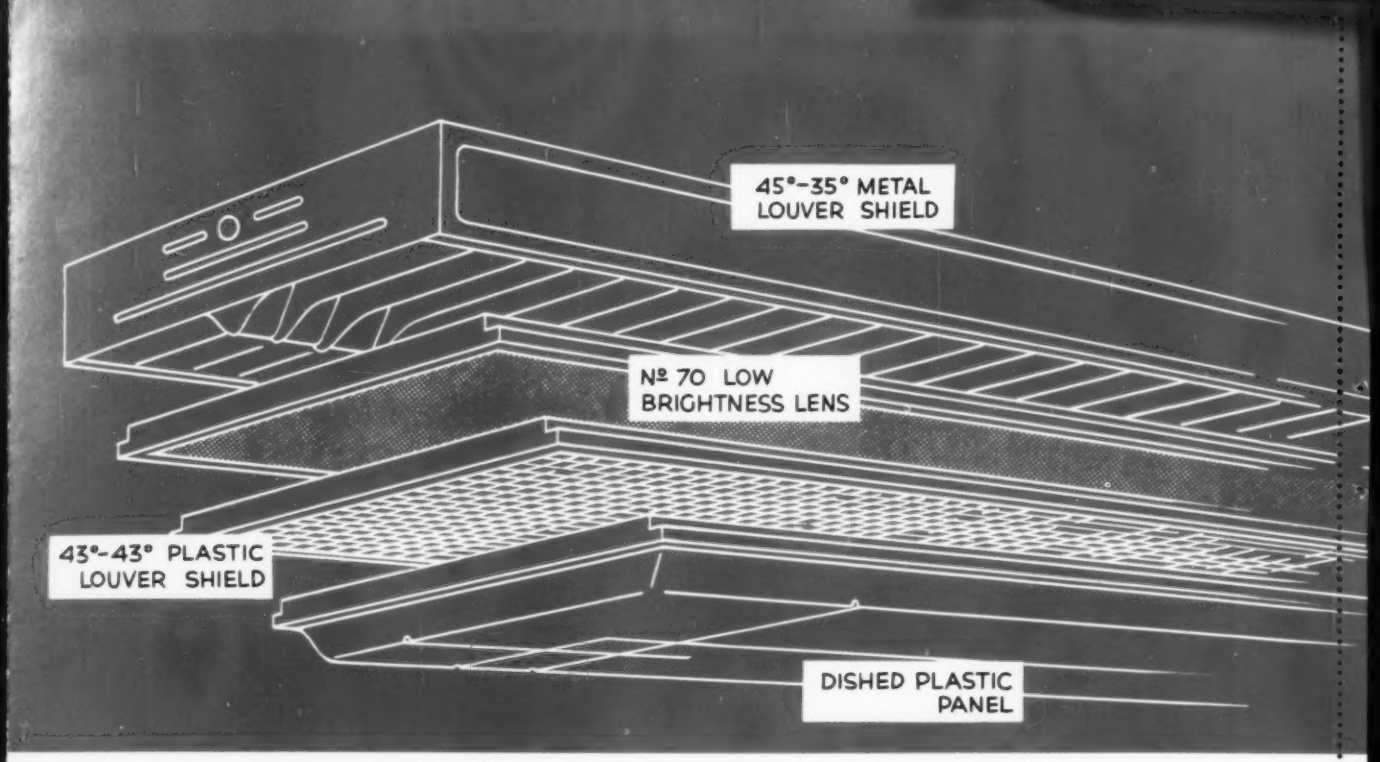


SYLVANIA *Presents the*

MOHAWK

A Completely New Series of SHALLOW
Commercial Fluorescent Fixtures

Offering You a CUSTOM APPROACH
to the Design of Lighting Systems



a custom approach to lighting design . . . **SYLVANIA's**

NEW MOHAWK Series

Shallow Fixtures for Surface Mounting on Modern Low Ceilings

2 WIDTHS . . . 2 LENGTHS . . . 2-to-6 LAMPS Mohawk fixtures in the narrow width (The Chief) use 2 lamps (in cross-section) and are available in 4 styles of shielding—in lengths of 4' and 8'.

The wider version of the Mohawk (The Super Chief), using 4 or 6 lamps (in cross-section), offers the same variety of lengths and styles with the single exception of the metal louver shielding. The Mohawk Series — one of the most complete lines of this type in the industry — includes 24 sizes for easy adaptability to any area or lighting level.

STURDY CONSTRUCTION The wrap-around body of the Mohawk consists of 20-gauge pre-formed top plate and 18-gauge side framing and end plates — welded together to form a single complete unit in both 4- and 8-foot lengths. The wireway is formed by 4-foot V-covers which snap into place without the use of springs, latches or screws. For all 4 types of Mohawk shielding, luminous side panels of extruded ribbed polystyrene provide side illumination that reduces brightness contrasts.

EASY TO MAINTAIN For easy handling, the shield frame comes in convenient 4-foot lengths for both 4- and 8-foot units. The shield frame is hinged to hang vertically from one side when opened. The hinging arrangement is designed so the entire shield frame can easily be removed when necessary. On the Mohawk with metal louvers both the hinging members on one side and the spring latch closing arrangement on the other side are invisible when the shield frame is closed. On all other models, where a spring latch arrangement would be impractical, the shield frame is held in place by captive thumb screws.

COMPLETE WITH BALLASTS Both 4- and 8-foot fixture units are available with dual 40-watt Rapid Start series ballasts. 8-foot fixtures are available with dual 75-watt Instant Start series ballasts. All ballasts are CBM certified. Lampholders for Rapid Start fixtures have silver-plated contacts for trouble-free operation.

MIRACOAT FINISH All metal parts are finished with Sylvania Miracoat Baked Enamel, which provides a minimum reflectance value of 86%. Metal parts are treated with a phosphate bonding process for better paint adhesion and resistance to rust and deterioration.

HIGH EFFICIENCY All units of the Mohawk Series are designed to provide exceptionally high efficiency for this type of surface-mounted unit.

FLEXIBLE MOUNTING The Mohawk Series is designed specifically for surface mounting, individually, or in continuous rows, or in geometric patterns.

SYLVANIA GUARANTEE Your guarantee of highest performance in the Mohawk — as with all other Sylvania fixtures — is Sylvania's complete guarantee which covers the fixture as a whole and all component parts. Also all Mohawk fixtures carry A. F. of L., I.B.E.W. and Underwriters' Laboratories labels.

Complete technical data including photometric detail available on request.

Sylvania

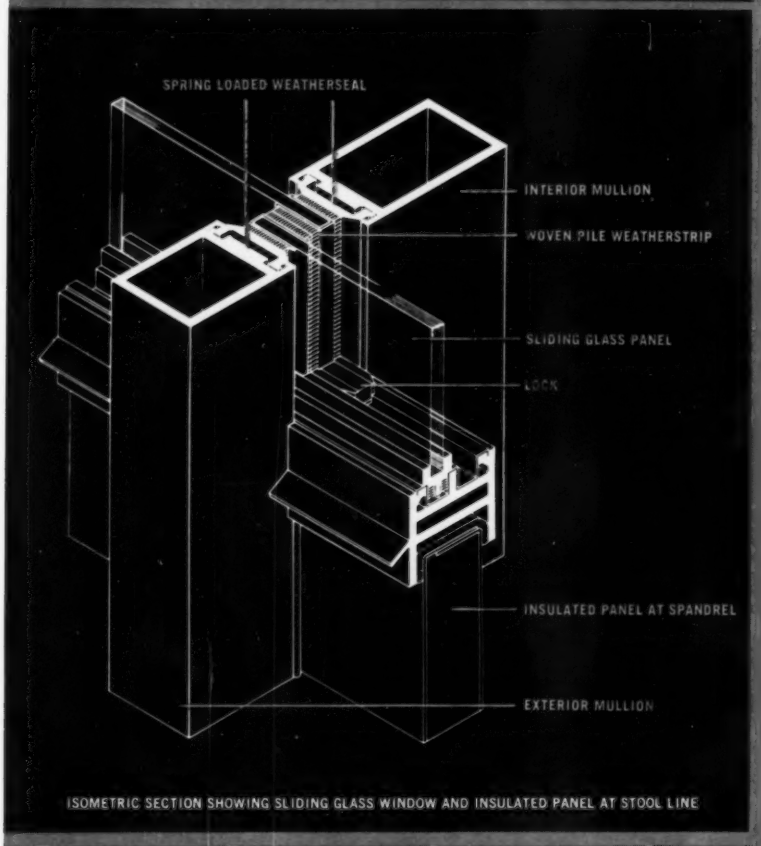
SYLVANIA ELECTRIC PRODUCTS INC.

WHEELING, W. VA.

V-100 (4-56-100M-DR) Printed in U.S.A.

GRIDWALL

A REVOLUTIONARY CURTAIN WALL BY GLIDE
PATENT PENDING



ISOMETRIC SECTION SHOWING SLIDING GLASS WINDOW AND INSULATED PANEL AT STOOL LINE

FACE THE FUTURE WITH GRIDWALL

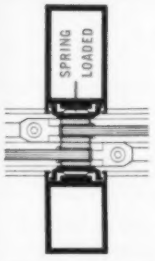
GRIDWALL is a revolutionary fenestral principal of split mullions with horizontal rails passing between. The space between the split mullion will accommodate, in any combination, insulated panels or by-passing horizontal sliding sash that slide in either direction for cleaning from the inside. Because overlapping stiles of sash are sandwiched between the split mullions, the appearance of the grid frame is that of a pure rectangular section with a 1½" wide face that is not increased, as is usually the case, by the addition of sash or other mouldings.

GRIDWALL can solve your curtain wall problems from design to erection. Consultation, cost information, help in engineering and design are available on request—

WRITE FOR INFORMATION TO:

glide **WINDOWS, INC.**
7463 Varna Ave., N. Hollywood, Calif.
Phone: STanley 7-3213

See GRIDWALL at the A.I.A. Convention, May 15-18, Booth #37, Biltmore Hotel, Los Angeles.



WEATHER SEAL
¾" wide mohair pile channel on edges of sliding glass overlap between split mullion and are clamped together by spring loaded sections of mullion the full height of sash.

YOUR GUIDE TO THE BEST IN ALUMINUM VALUE

WE CHOSE ALCOA ALUMINUM MILL PRODUCTS

THE RECORD REPORTS: CONSTRUCTION COST INDEXES

Labor and Materials — **U. S. average 1926–1929 = 100**

Presented by Clyde Shule, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.4	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	265.2	262.2
1952	278.2	274.8	271.9	274.9	271.8
1953	281.3	277.2	281.0	286.0	282.0
1954	285.0	278.2	293.0	300.6	295.4
1955	293.1	286.0	300.0	308.3	302.4
Dec. 1955	299.1	291.7	307.9	316.3	311.3
Jan. 1956	303.0	293.7	312.1	321.8	316.1
Feb. 1956	306.6	298.7	313.7	322.5	318.3
	% increase over 1939				
Feb. 1956	148.2	144.0	132.3	141.8	144.7

ATLANTA

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	82.1	80.9	84.5	86.1	83.6
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1946	148.1	149.2	136.8	136.4	135.1
1947	180.4	184.0	158.1	157.1	158.0
1948	199.2	202.5	178.8	178.8	178.8
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
1953	223.3	224.6	221.3	221.8	223.0
1954	219.6	219.1	223.5	225.2	225.4
1955	225.3	225.1	229.0	231.5	231.8
Dec. 1955	230.8	230.1	235.3	238.2	237.2
Jan. 1956	231.2	230.3	235.9	239.0	237.8
Feb. 1956	233.8	232.4	236.9	240.1	239.1
	% increase over 1939				
Feb. 1956	170.9	179.7	149.1	146.5	152.5

ST. LOUIS

1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
1953	263.4	256.4	259.0	267.6	259.2
1954	266.6	260.2	263.7	273.3	266.2
1955	273.3	266.5	272.2	281.3	276.5
Dec. 1955	278.3	270.8	278.1	286.9	282.5
Jan. 1956	285.1	276.3	285.5	297.0	289.4
Feb. 1956	286.9	278.6	285.8	297.2	289.8
	% increase over 1939				
Feb. 1956	160.3	160.4	140.8	148.1	143.5

SAN FRANCISCO

1930	90.8	86.8	100.4	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
1953	255.2	257.2	256.6	261.6	259.7
1954	257.4	249.2	264.1	272.5	267.2
1955	268.0	259.6	275.0	284.4	279.6
Dec. 1955	272.7	264.3	281.0	289.7	286.3
Jan. 1956	272.7	264.3	281.0	289.7	286.3
Feb. 1956	274.8	267.0	281.3	289.9	286.8
	% increase over 1939				
Feb. 1956	160.2	168.9	139.6	137.8	146.2

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

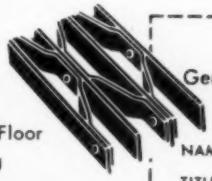
Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926–29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

BORDEN MANUFACTURES EVERY TYPE FLOOR GRATING

IN FERROUS AND NON-FERROUS METALS

- **EASY TO INSTALL** – engineered in conveniently sized units for easy installation.
- **EXTRA STRONG** – reinforced, designed with maximum safety factor.
- **LIGHT WEIGHT** – approximately 80% open, reduces dead weight, allows greater live load.
- **SELF-CLEANING** – creates greater safety, economy of maintenance, no sweeping or washing required.



Write for complete information on BORDEN All/Weld, Pressure Locked, and Riveted Floor Gratings in this FREE 8-page catalog

BORDEN METAL PRODUCTS CO.

822 GREEN LANE ELizabeth 2-6410 ELIZABETH, N. J.
SOUTHERN PLANT—LEEDS, ALA. — MAIN PLANT—UNION, N. J.

BORDEN METAL PRODUCTS CO.

Gentlemen:

Please send me BORDEN Catalog

NAME .....

TITLE .....

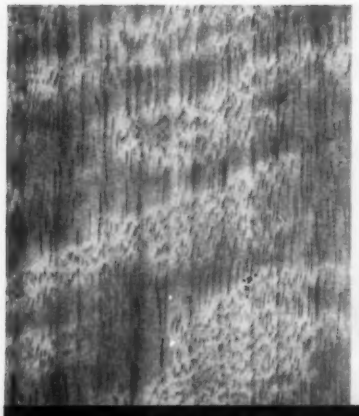
COMPANY NAME .....

ST. AND NO. .....

CITY AND STATE .....

三國漢魏吳

When Genghis Khan



You cannot specify a finer, richer, more beautiful paneling than Teak.

This laughing Buddha rests on a teakwood base 13 centuries old.

Rare Woods To Frame The Creative Works of Architects All Over the World.

Satinwood from Ceylon	Hawaiian Koa	Australian Walnut	Figured English White Harewood
Butternut	Prima Vera	Macassar Ebony	Figured Cherry
Crowntree	Teak	Brazilian Rosewood	Swiss Pearwood
English Brown Oak	Bosse'	Rhodesian Walnut	Figured White Ash

RARE WOODS

Stem

Conquered Asia . . . . .

The Beautiful TEAKWOOD Base of the Laughing Buddha Was Already 13 Centuries Old.

Carved when Babylon was young . . . its slotted niches have received written prayers and hopes from countless billions of hands . . . its patina is the work of the generations and has survived 25 centuries of time. Today architects know that teakwood wall paneling brings its dominant qualities of richness, permanence, stability and confidence to institutions of trust—banks, brokerage houses, insurance companies and executive offices of corporations.

In the homes of social leaders teakwood and aristocracy belong together—its stability and timeless beauty connoting fine family tradition and history . . . with the same insistence as a gallery of family portraits.

Teakwood plywood paneling is especially adapted to churches, executive offices, banks, hotels, hospitals and fine stores.

Chester B.

STEM

INCORPORATED

785 Grant Line Road, New Albany, Indiana

BREUER SPEAKS

BY ARTHUR DREXLER

Sun and Shadow: The Philosophy of an Architect. By Marcel Breuer. Editing and Notes by Peter Blake. Dodd, Mead & Company (New York) 1956. 206 pp. illus. $7.50. (Distributed by F. W. Dodge Corporation)

THIS BOOK SHOULD INTEREST ARCHITECTS primarily because it contains some clear and effective statements by Marcel Breuer. These statements are taken from tape-recorded conversations with Peter Blake, whose own study of Breuer's work, published in 1949 by ARCHITECTURAL RECORD in collaboration with the Museum of Modern Art, is now out of print. The new book includes most of the material in the earlier one as well as work completed or underway since 1949.

At Breuer's suggestion the book has been designed by Alexey Brodovitch so that its binding must be held at the top and the pages flipped over like those of a calendar. The advantage of slightly larger photographs this layout allows is cancelled by the discomfort of having to pin the book down to a table or prop it up in one's lap in order to read it. But the layout is peculiarly of a piece with the sequence in which buildings are presented. This is worth describing because in certain ways it reflects the spirit of Breuer's architecture.

Part I is devoted to work and projects from 1920 to 1937. Part II, called Principles, includes Breuer's statements on his philosophy of architecture, on architecture in the landscape, and on city planning. Part III, called The Art of Space, is concerned with structural systems, color, texture, materials, and specific forms of stairs, fireplaces, sunshades, and furniture. Part IV is devoted to work and projects from 1937, the date of Breuer's arrival in America, to 1955. The architect's own statements appear in sections II and III, and Peter Blake, architectural editor of *House and Home*, has provided notes for the entire book.

Readers of architectural magazines are familiar with those partial presentations of buildings which have in common one particular feature. Thus, under a lead like "Stone Will Make Your Houses Look Strong," or "Try Water for Luxury," a magazine may assemble a scrap book of stone walls or reflecting pools from 8 or 10 buildings otherwise unrelated. While this method has the advantage of giving many architects the feeling of being "published," it has the disadvantage of fracturing even the most monolithic conception into details largely incomprehensible because they have been taken out of context.

Breuer's work is similarly presented. Only a few of the buildings are illustrated on successive pages; for the rest, the reader will find their component parts scattered throughout the book so that similar solutions to different problems may be compared as expressions of a guiding philosophy. A connection between this nervous discourse and the spirit of Breuer's architecture is perhaps suggested by Breuer himself in his discussion of symmetry and asymmetry: ". . . the center of a thing is its most important zone. If we enter into the center every part is as close to us as possible," and, in another section, "The real impact of any work is the extent to which it unifies contrasting notions — the opposite points of view. *I mean unifies and not compromises* [Breuer's italics]. This is what the Spaniards express so well with their motto from the bullfights: *Sol y sombra*, sun and shadow . . . sun *and* shadow."

It may be that the unification of opposites depends on what one has first decided to consider as opposed, rather than on a juxtaposition that demands the *a priori* existence of opposites, encouraging oppositions simply to lend poignancy to their contrasts. In practice this may be illustrated by one of Breuer's characteristic conceptions, the bi-nuclear house, in which are opposed aspects of family life: parents versus children, living room versus playroom, serenity versus commotion. Localized in distinct architectural units, together they seem to celebrate a larger opposition between the esthetics of Architecture and the messiness of Life.

Presumably the balance, the inner meaning, that prevents these assumed opposites from flying apart is best observed from the still center — but in bi-nuclear houses the center is usually a narrow corridor that separates as much as it connects.

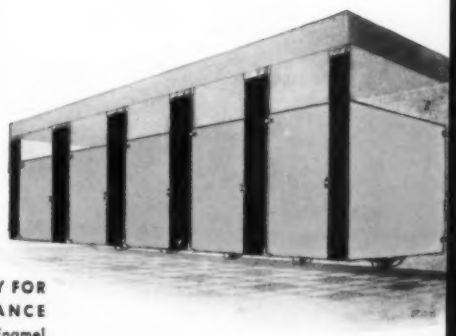
(*Continued on page 64*)

TOILET COMPARTMENT CONSTRUCTION THAT *Saves money for building owners*

Ask *Six Searching Questions* TO EVALUATE

Sanymetal PORCENA*

(*Porcelain on Steel)



LABEL OF QUALITY FOR LOWEST MAINTENANCE

Porcena meets Porcelain Enamel Institute standards for acid-resisting porcelain enamel—recognized label of quality. Quality enamel for toilet compartments, pioneered by Sanymetal, costs less to maintain. It withstands scratches, shocks, is easily cleansed of pencil and lipstick marks, *never requires refinishing.*

YOUR REASON for selecting Sanymetal *PORCENA* (Vitreous Porcelain on Steel) as the material for toilet compartments is to save money for the building owner. *PORCENA* saves because it is durable, so easily cleaned. But to compare *PORCENA* with others products, get candid answers to these questions:

Is the product—

... proved by many thousands of successful installations, not by a few, to be beyond an "experimental" stage? *Sanymetal Porcena is!*

... guaranteed for quality attested by the Porcelain Enamel Institute label? *Sanymetal Porcena is!*

... available in 22 lustrous, lasting, uniform colors? *Sanymetal Porcena is!*

... fully engineered so there is no need to drill, cut, or shape the porcelain surface, exposing bare metal? *Sanymetal Porcena is!*

... fitted with hardware designed to match the extra durability and weight of porcelain enamel construction? Hardware for *Sanymetal Porcena is!*

... backed by 20 years of experience in which *not one* installation has failed, faded, required repair or replacement in normal use? This is true of *Sanymetal Porcena!*

Ask these revealing questions, and let the answers be your guide.

See Sweet's, or send for Catalog 93 describing all Sanymetal Compartments. If you wish we will mail you all advertisements in this series explaining construction details that mean quality.

Genuine
PORCELAIN ENAMEL
THE LIFETIME FINISH
THIS MATERIAL IS
ACID RESISTING
PORCELAIN ENAMEL
GUARANTEED by the manufacturer to conform with the "General Specification for Porcelain Enamel Surfaces-Acid Resistant Type (PEI. S-102)" of the Porcelain Enamel Institute, Washington, D. C.
TO CLEAN:

LOOK FOR THIS

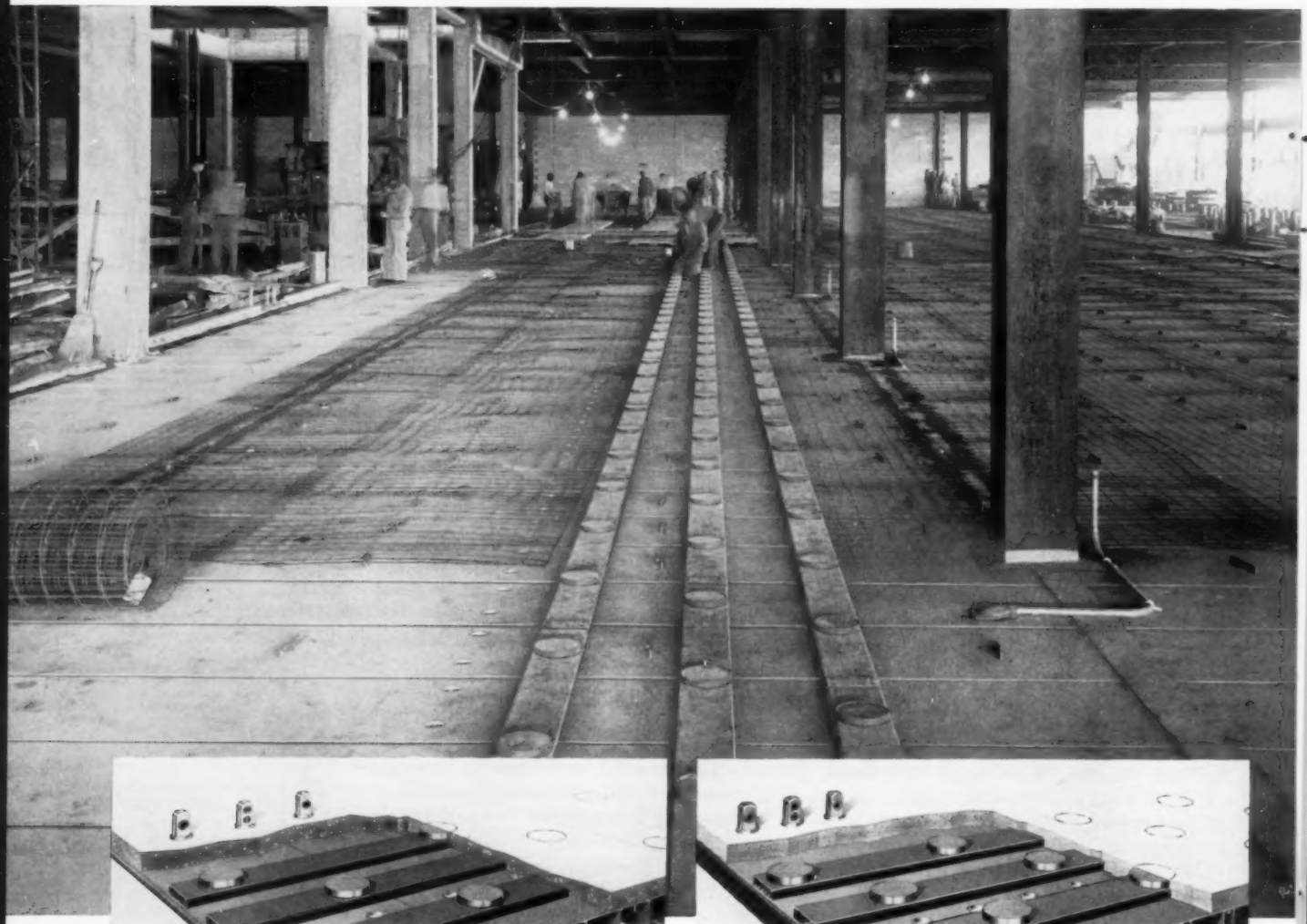
NAMEPLATE WHICH IDENTIFIES EVERY SANYMETAL INSTALLATION

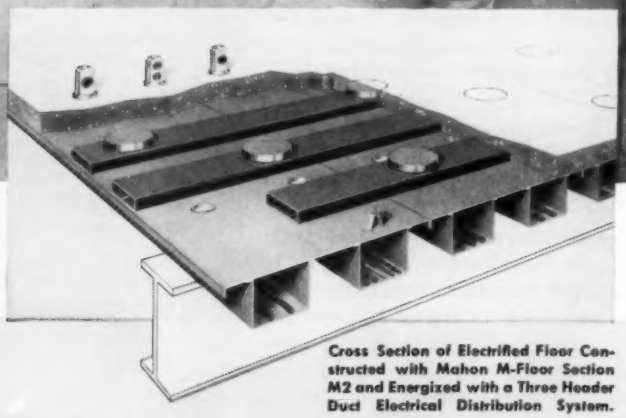
Sanymetal® PRODUCTS COMPANY, INC.

1689 URBANA ROAD • CLEVELAND 12, OHIO

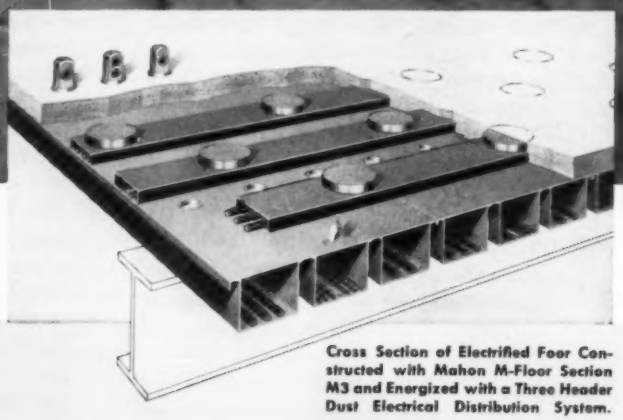
PORCENA *is a long-life construction feature available on all* **Sanymetal** *Flush Type Compartments*

M-FLOORS . .





Cross Section of Electrified Floor Constructed with Mahon M-Floor Section M2 and Energized with a Three Header Duct Electrical Distribution System.



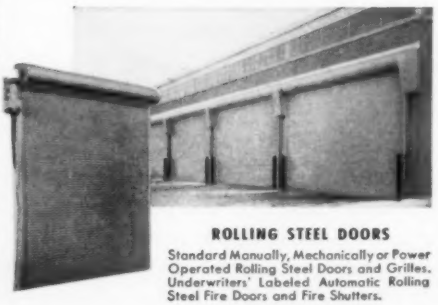
Cross Section of Electrified Foor Constructed with Mahon M-Floor Section M3 and Energized with a Three Header Dust Electrical Distribution System.

INSULATED METAL WALLS

Three exterior patterns with a "U" Factor equivalent to or better than a conventional 16" Masonry Wall. Constructed up to sixty feet in height without a horizontal joint.

STEEL ROOF DECKS

Standard Double Rib, Wide-Flange Double Rib, and Long Span M-Decks, which can be furnished perforated and fitted to provide an efficient acoustical ceiling.



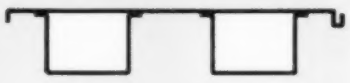
ROLLING STEEL DOORS

Standard Manually, Mechanically or Power Operated Rolling Steel Doors and Grilles. Underwriters' Labeled Automatic Rolling Steel Fire Doors and Fire Shutters.

. . Modern Electrified CEL-BEAM Floor Systems Provide Electrical Availability in Every Square Foot of Floor Surface

MAHON
M-FLOOR SECTIONS

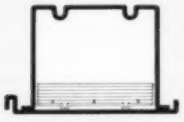
M-FLOOR SECTION
M1



M-FLOOR SECTION
M2

M-FLOOR SECTION
M3

COMBINATION DECK/CEILING UNIT



MAHON
M-DECK SECTION
M1SR

More important, Electrified M-Floors provide the Necessary Flexibility for convenient relocation or addition of Floor Service Outlets, and the unlimited Raceway Capacity to meet Future Electrical Demands for the Life of the Building.

In addition to the convenience of having all-over floor surface availability of any type of electrical circuit for power operated equipment, telephone or intercom systems, M-Floors provide the built-in raceway capacity which insures a building against electrical obsolescence in the years to come.

M-Floor construction is fast, dry, and firesafe . . . it is light weight construction which permits cumulative savings throughout the structural frame and foundation of any multiple story building. And, during construction, close follow-up of steel erection with over-all structural floors provides an excellent storage and working platform for other trades—reduces construction time materially.

When you plan new buildings, you will want to design into them all the cost-saving advantages and the year-after-year convenience of modern, light weight M-Floor construction. Your clients will appreciate it, and they will appreciate it more and more each time office arrangements have to be changed and electrical and communication service outlets added or relocated to meet new demands.

COMBINATION M-DECKS and ACOUSTICAL CEILINGS

Mahon M-Deck Section M1SR is designed especially for Long Span Deck/Ceiling Combinations . . . it provides an economical roof deck and a highly efficient acoustical ceiling in one structural unit. The Section is produced with bottom metal perforated and sound absorbing material fitted inside the Cel-Beam. It may be employed with flat plate down, to produce a smooth metal surface ceiling, or with the flat plate up, for a beamed ceiling effect.

For auditoriums, schools, armories, sports arenas, or other types of buildings where roof purlins are objectionable from an appearance standpoint, these Long Span Acoustical Sections offer a simple and economical solution—they span from wall-to-wall or from truss-to-truss.

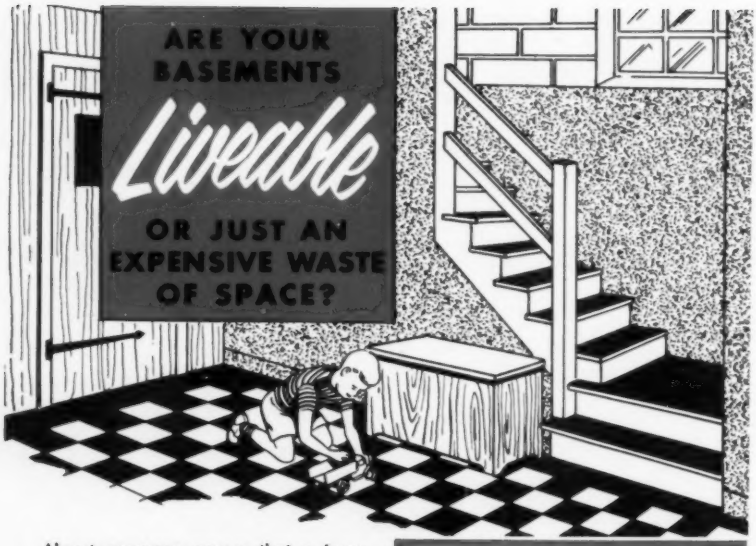
See Sweet's Architectural or Industrial Construction Files for Information including Engineering Data and Specifications, or write for Catalog M-56.

CONCRETE FLOOR FORMS
Mahon Permanent Concrete Floor Forms in various types meet virtually any requirement in concrete floor slab construction over structural steel framing.

THE R. C. MAHON COMPANY • Detroit 34, Michigan

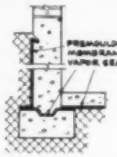
SALES-ENGINEERING OFFICES in DETROIT NEW YORK and CHICAGO • REPRESENTATIVES in PRINCIPAL CITIES

MAHON



Almost everyone agrees that a basement is a desirable addition to a home . . . yet too many basements are merely damp, dark rooms that are not fit for recreation or storage. However, better days are here . . . for the proper installation of Sealtight Premoulded Membrane, during the original construction, provides permanent protection against vapor migration and thereby completely eliminates dankness. Now basements can provide a warm, dry, liveable area that's ideal for the storage and recreational requirements of a family. Wood or resilient flooring and paneled wall treatments are not only feasible but may be safely and permanently installed. A warm, dry basement not only provides a more liveable home but a home that's also more salable in the future.

INSTALLATION DETAILS



Sealtight Premoulded Membrane applied to the walls and under the slab (as illustrated) prevents any pressure movement of vapor or capillary (wick) movement of free water. It provides the necessary impaction sheet and vapor seal between the footing and wall. Premoulded Membrane need not be bonded to the wall as it can be "hung" from a reglet or masonry.

SEALTIGHT Premoulded Membrane
TRADEMARK

the industries only TRUE VAPOR SEAL—is your one guarantee of warm, dry basements

The one sure way to "eliminate" the ravages of destructive moisture is with the use of Premoulded Membrane in the original construction. Sealtight Premoulded Membrane has a permeance rating of only .0066 grains per square foot . . . is resistant to rot, mold, and termites . . . is strong enough to resist tearing and puncturing . . . will expand and contract with the slab above and is quickly and easily installed. We sincerely advise your comparison of Premoulded Membrane against all other vapor barrier products . . . we're sure that once you do you'll also agree that there's only one TRUE vapor seal on the market—Premoulded Membrane.

ARCHITECTS, BUILDERS, DEALERS . . .

WRITE TODAY for complete information that tells you where, why and how to use Sealtight Premoulded Membrane, the only true vapor seal and Corktite, the resilient, impermeable perimeter insulation.

"Guardian of the Home"

W. R. MEADOWS, INC.

4 KIMBALL ST. • ELGIN, ILLINOIS

REQUIRED READING

(Continued from page 60)

The interpretation of different aspects of the same thing as opposites, to be made compatible by the manner in which they are juxtaposed, may also lead to the deliberate fragmentation of what is already unified: thus many of Breuer's larger buildings sacrifice the scale appropriate to them because they insist on being collections of small units.

Breuer's great artistry depends on the unexpectedness and precision of his detail, on his skillful and measured use of texture, and on a wider originality that perceives not so much potential harmony as it does the expressive possibilities of tension. It may be that a preoccupation with what is taut, strained, and often unnerving precedes the rationale that proves its logical necessity, but the rationale and the preoccupation both belong to the main stream of 20th century architectural thought. That is what gives to Breuer's philosophy and his work their continuing fascination.

THE ROLE OF THE ARCHITECT IN PLANNING

As more and more building projects are raised in place of old city landmarks and more new villages are sprawled across the country side — the role of the architect in city and regional planning becomes increasingly apparent.

As was so well expressed in a recent slide lecture on the subject given by Ian McCallum of ARCHITECTURAL REVIEW at Yale University, the architect on the planning committee must supply imagination as well as continuity or harmony to the scheme. He must stimulate a demand by the committee for good new and functional designs that will harmonize with — not destroy — the existing elements, be they building or landscape. Unfortunately most of Mr. McCallum's slides showed the negative aspect, where, in the frantic race for expansion country- and city-scape alike have been slashed with technology used unintelligently and unimaginatively.

In the few good examples shown it became apparent that the architect on the committee had more at his finger tips than a knowledge of local building codes, slum clearance and transportation solutions and the latest technical advances in construction.

Included in this supplementary bib-

(Continued on page 384)

New cost-cutting construction

introduced by Styrofoam insulation method

Now Dow plastic foam insulation eliminates furring, lathing . . . assures warm, waterproof masonry walls . . . with construction method proved in low-temperature structures.

Authorities have been astonished recently to see how damp-free masonry homes can be erected in less time—without furring or lathing—by using the low-temperature method with Styrofoam® (a Dow plastic foam).

This rigid, water-resistant insulation bonds to masonry walls with portland cement mortar. Plaster keys directly to its surface. Time-consuming jobs are eliminated, and the result is a dry, well-insulated structure. These are a few of the many reasons why experts agree that Styrofoam brings a new concept to home construction. Yet no special tools or training are required.

Proved best by industry—

Styrofoam has been manufactured in commercial quantities since 1943. In that time it has been used with exceptional success in industrial installations across the country. The list of foremost organizations that have used Styrofoam reads like "Who's Who"! Now increased production makes the unique advantages available to the builder field. Its low thermal conductivity, its high resistance to water and water vapor, combined with its exceptional strength and light weight, add up to make a superior insulation for all building needs.

Everyone benefits—

With Styrofoam the home owner enjoys the finest insulation—plus smooth, long-lasting plaster walls. The builder profits from the elimination of furring or lathing—plus exceptional ease of handling. And the architect is able to specify walls he knows will remain dry.

Brochure of architectural details is available at no cost from Plastics Sales Dept. PL 527V, THE DOW CHEMICAL COMPANY, Midland, Michigan.

Builder shows 4 steps to

1 **MASONRY** wall is erected according to usual practice . . .

2 **MORTAR** of portland cement is applied to Styrofoam . . .

What do the unique advantages of Styrofoam mean to architects?

One of the first concerns of every architect is to erect better structures—at lower cost. And Styrofoam now makes an outstanding contribution to help accomplish these twin goals. For instance—

Styrofoam is so strong, so rigid that concrete floors are poured over it without additional support (so larger sections can be applied at one time!).

It is the lightest of all rigid insulations, weighing only 2.4 ounces per board foot (for easier handling on the job).

It is not affected by water or water vapor because of its noninterconnecting cellular structure. Even after a weeks immersion, only the open surface cells show any evidence of moisture (for dry living quarters).

The low thermal conductivity cannot be matched by any other insulation with comparable properties. The average "K" factor is 0.25 BTU-in./sq. foot-hr. —°F. (for comfortable housing, winter and summer).

Exhaustive tests indicate Styrofoam lasts a lifetime (for higher-value structures and completely satisfied clients).

It is nondusting, nonflaking, and can be cut easily with common tools (for low investment).

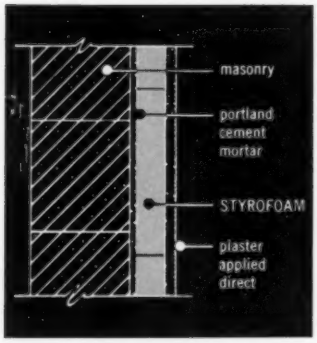
It is clean, odorless and nonirritating to the skin (for contented workers).

Advantages like these can be turned to the builder's profit—write for **free brochure of architectural details** and specify number needed. Address: Plastics Sales Dept. PL 527V, THE DOW CHEMICAL COMPANY, Midland, Michigan.

eliminate furring, lathing

3 **STYROFOAM** adheres readily to masonry without furring!

4 **PLASTER** keys directly to Styrofoam without lathing!



Styrofoam is readily adhered to masonry surfaces by portland cement mortar, cold-setting asphalts or roller-coat-applied hot melt.

comparative (u) values

wall type	wall thickness	(u) values A	B	C
Brick	8″	.50	.30	.158
4″ face	12″	.36	.24	.139
Rest common	16″	.28	.20	.123
Concrete	6″	.79	.39	.180
	8″	.70	.36	.175
	10″	.63	.34	.170
	12″	.57	.33	.166
Concrete	8″	.56	.32	.164
Block	12″	.49	.30	.158
Cinder	8″	.41	.27	.146
Block	12″	.38	.25	.142

Where:
*A = plain wall
*B = furred, lathed and plastered wall
*C = 1″ thick Styrofoam with plaster direct—no furring or lathing

engineering data

thermal properties	
Thermal Conductivity (K factor) B.T.U. /ft. /hr. /in./°F.	0.23—0.27 at mean temperature of 40°F.
Linear Thermal Coefficient of Expansion	.00003 to .00004 in./in./°F. between.....0°F. and 80°F.
Specific Heat	0.27 B.T.U./lb./°F. at 40°F.
Resistance to heat (maximum recommended temperature for continuous use)	Styrofoam 22—175°F. Styrofoam 33—155°F.

physical properties		Styrofoam 22	Styrofoam 33
Density	(lb./cu.ft.)	1.6—2.0	1.7—2.3
Compressive yield strength	(p.s.i.)	16—32	16—38
Tensile strength	(p.s.i.)	45—61	65—95
Shear strength	(p.s.i.)	27—36	30—40
Flexural strength	(p.s.i.)	42—61	48—99
Compressive modulus	(p.s.i.)	1200—1700	1500—2000
Bending modulus	(p.s.i.)	1000—1285	1250—1760
Modulus or rigidity (shear modulus)	(p.s.i.)	700—1600	1000—1300

water resistance properties	
Capillarity	None
Water absorption	Less than 0.03% by volume
When subjected to 90°F., 90% relative humidity for 15 days	
Water adsorption	Water pick-up only on surface cells less than 0.15 lb./sq. ft. of area.
When completely submerged for one week	

vapor transmission	
When Styrofoam acts as a barrier between spaces having different atmospheric conditions.	1.0—2.0 grains/sq.ft./hr./in. of thickness/in. of Hg. vapor pressure difference.

Copyrighted by The Dow Chemical Company 1955.

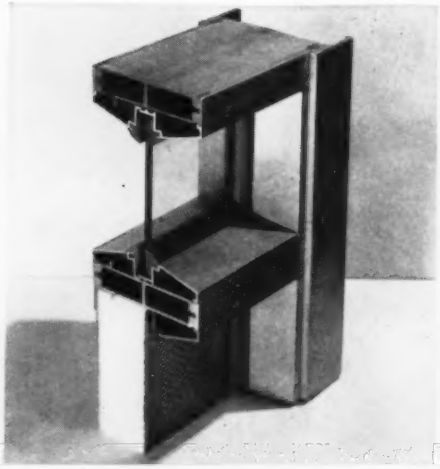
you can depend on DOW PLASTICS

DOW

Check these other applications where

Styrofoam is superior

CAVITY WALLS may be constructed with air space on either side of Styrofoam.

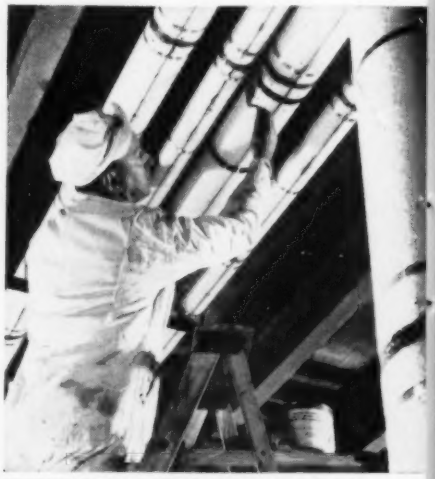


WALL PANELS with Styrofoam cores are available from several manufacturers.

FOUNDATION AND SLABS—Unusually satisfactory with wet-proof Styrofoam.

ROOFS—Exceptional strength is combined with light weight to reduce dead load.

LOW-TEMPERATURE CONSTRUCTION—Unique combination of properties.



INDUSTRIAL EQUIPMENT—Tanks, pipes and heat exchangers perform better.

Free Brochure of Architectural Details

A brochure of architectural details for various applications of Styrofoam is available to you without charge. Address: Plastics Sales Department PL527V, THE DOW CHEMICAL COMPANY, Midland, Michigan.

you can depend on DOW PLASTICS

DOW

WAYNE AT BAKERSFIELD, CALIFORNIA
Bakersfield High School
Architects: C. B. Alford & W. J. Thomas
Bakersfield, California

When it comes to gymnasium seating MOST schools specify WAYNE

Sound engineering counsel during gymnasium planning solves many problems before they happen . . . saves money too! It's the sound way to integrate your building team. Here are three seating check-points to consider early in the planning stage:

SAFETY— Sound all-steel understructure and fully closed riser construction provide maximum safety and give the stand better appearance when extended. (Complete student safety is always a must!)

PERFORMANCE— Exclusive rotating alignment frame assembly guides Wayne Rolling Gymstands easily to a straight, parallel position, free from jamming or side sway. (Wayne's famous engineering advances insure positive performance for years of tough school service.)

APPEARANCE— Select wood, fine finishing, and a completely vertical front when closed give Wayne gymstands the appearance of handsome wood paneling. (Smart appearance is a big factor!)

All over the country, men who plan gymnasium seating specify Wayne because Wayne rates high on all important counts — planning — performance — appearance —safety—economy.

PLANNING A GYMNASIUM? Write for your personal copy of Rolling Gymstand Catalog R-55 —a guide to better gymnasium planning. Write direct to —

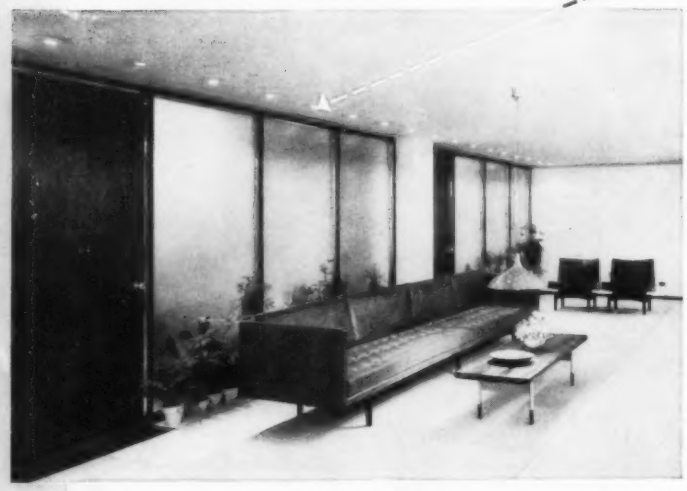
WAYNE

Wayne Iron Works • 148 N. Pembroke Ave., Wayne, Pa.

STRIPLINE

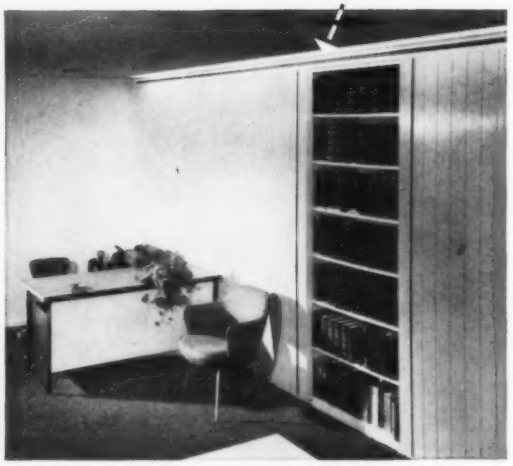
Distinctive Air Diffusers

by AGITAIR®



Ceiling installation of STRIPLINE slot diffusers.

for all interiors



Sidewall installation of STRIPLINE slot diffusers.

STRIPLINE combines the best features of both slots and efficient air diffusers to provide equalized air flow throughout its entire length.

STRIPLINE slot diffusers are slenderly designed, inconspicuous, practical and versatile. These slot diffusers can be located in walls, ceilings, coves, moulds, window reveals and stools or almost anywhere to suit interior design.

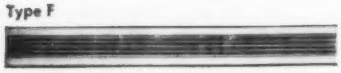
Write for complete Stripline catalog.

AIR DEVICES INC.

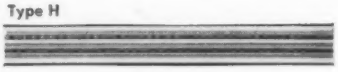
185 MADISON AVENUE, NEW YORK 16, N. Y.

air diffusers • filters • exhausters

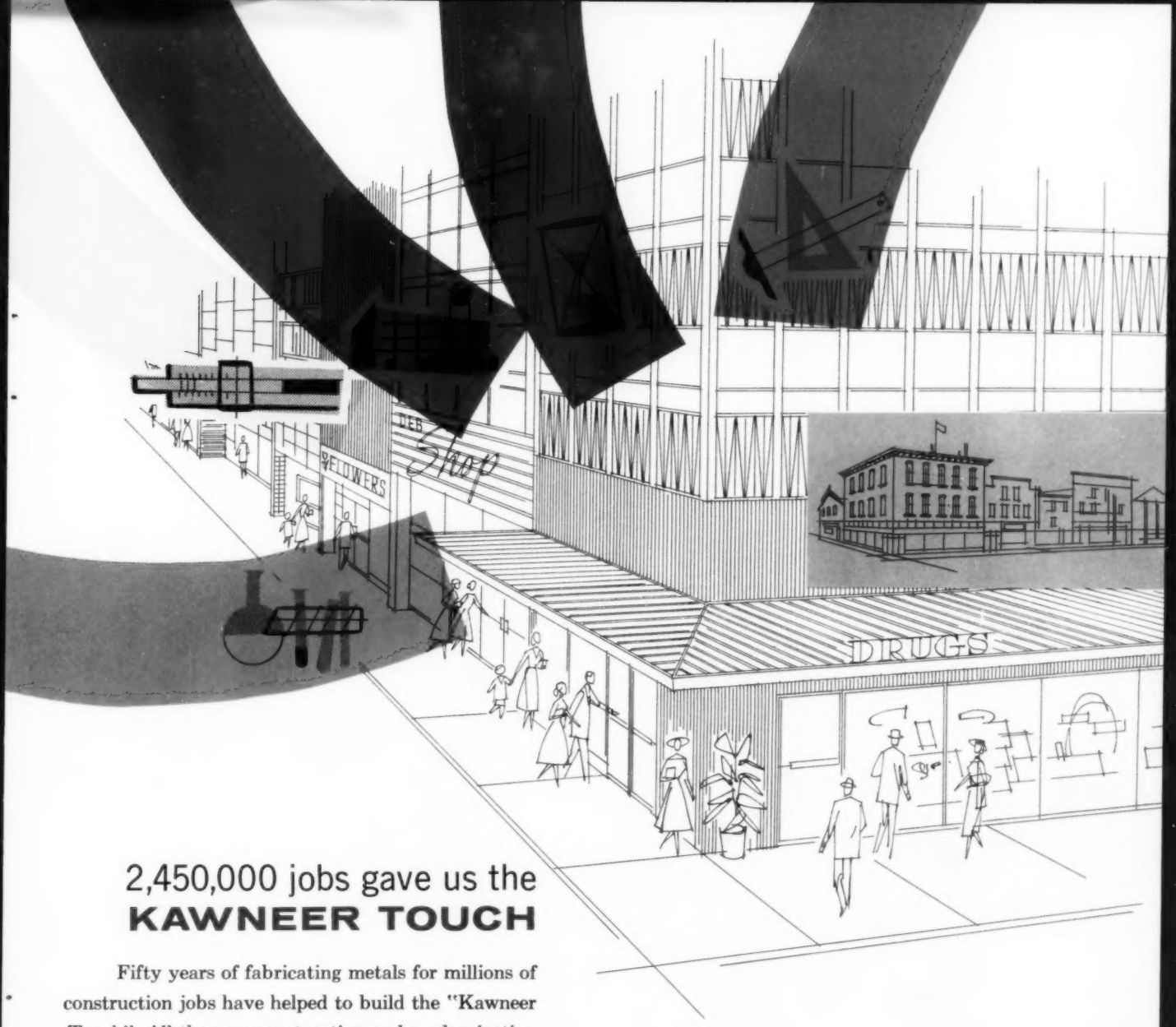
Type F



Type H



Type S



2,450,000 jobs gave us the **KAWNEER TOUCH**

Fifty years of fabricating metals for millions of construction jobs have helped to build the "Kawneer Touch". All the new construction and modernization jobs from small store fronts to steamships have given us *our* skills . . . a "touch" that makes your job sparkle with finesse. On top of design and finish we offer construction "sense" that brings you metals that are easy to assemble on the job. You enjoy the benefits of *factory-controlled construction labor.* See your Kawneer representative and dealer. Their job is to serve you—to help you with information, details and specifications.

50TH ANNIVERSARY

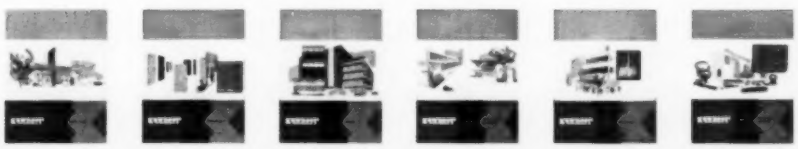
Kawneer

General Offices
NILES, MICHIGAN

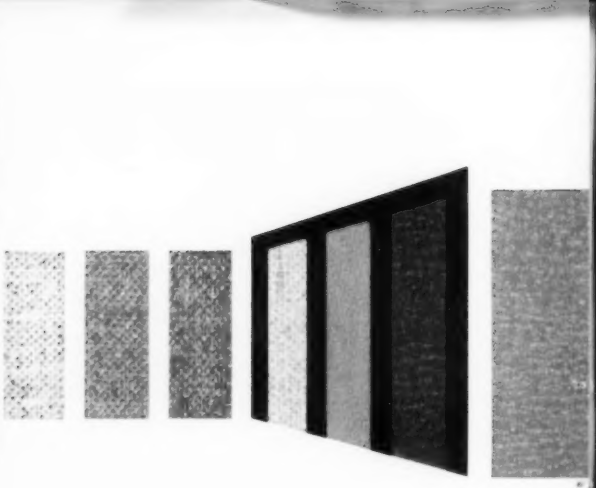
ARCHITECTURAL PRODUCTS DIVISION

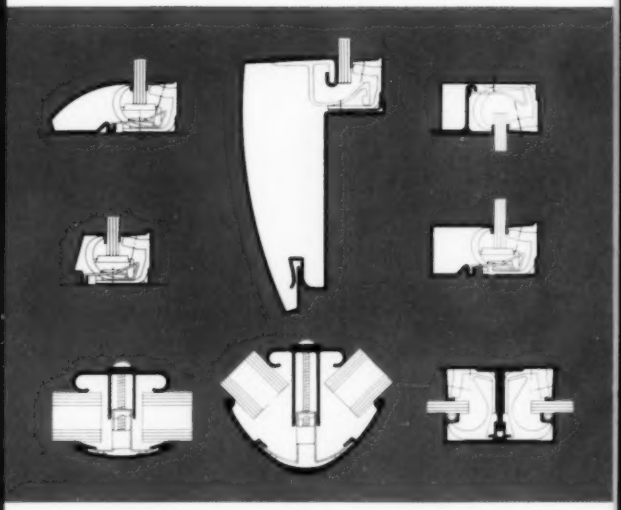
1906–1956

foremost fabricator of aluminum and plastics for the construction, aircraft and appliance industries since 1906.



the complete Kawneer line plus **NEW** 50th Anniversary products





a. doors and entrances

A complete line of narrow stile doors with the unique interchangeable hardware feature; wide stile doors; honeycomb core flush doors; and **new** full-vision, sliding glass doors for homes, offices and stores.

b. store fronts

An extensive variety of sash assemblies, trim members and facings to complement the store front design. **New** sash with a striking color stripe combines aluminum and vinyl.

c. sun control products

Durable, aluminum, sun-reflecting, canopies for store fronts, walks or parking. Sun-heat and glare controlling aluminum Kawneer K-Louvers, including the **new** *operating* unit help solve sun control problems.

d. facing material

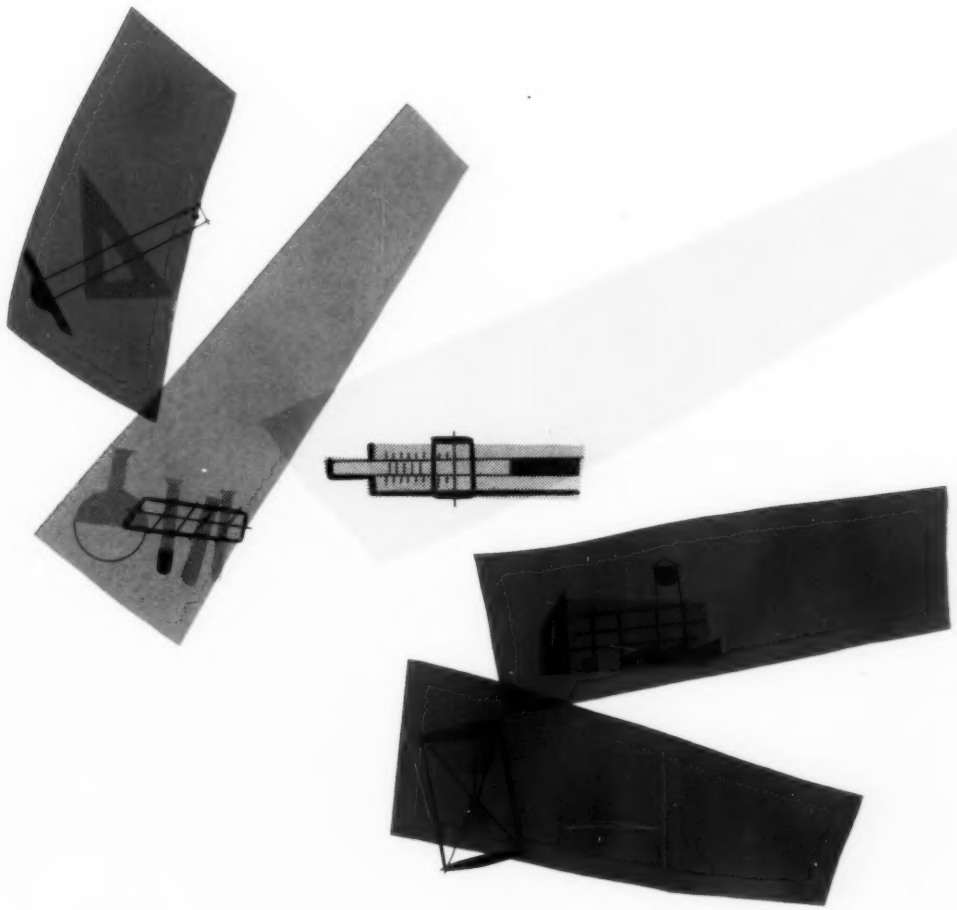
Kawneer porcelain enamel and alumilited Zourite facing, now in two modular sizes and a variety of colors; the narrow-face 2″ and the **new** bold-face 6″. Can be used in combination or individually.

e. metal wall

Kawneer will provide shop-prefabricated and water-resistant window-spandrel units on the job, including erection. One responsibility from inception through installation.

f. unit wall

New unit wall system for single or 2-story buildings. Complete flexibility of design through a wide selection of color, unit types, unit sizes and choice of proportions, all with basic standard units. Superior weatherproofing system.



products featuring the **"Kawneer Touch"**—

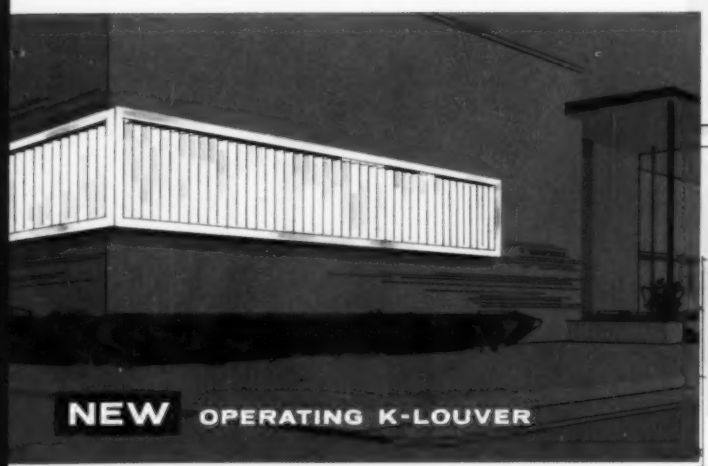
the intrinsic value developed from

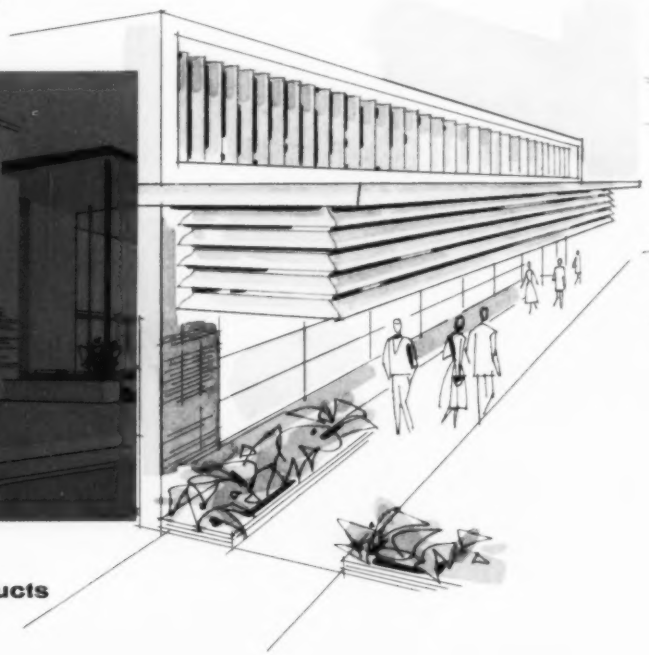
working hand-in-hand

with the construction industry for 50 years

a. doors and entrances

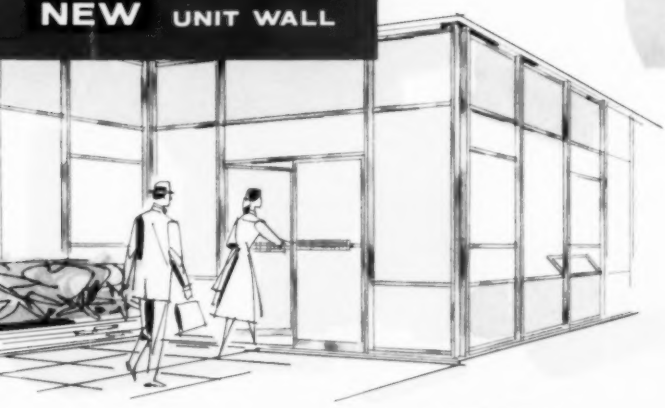
b. store fronts



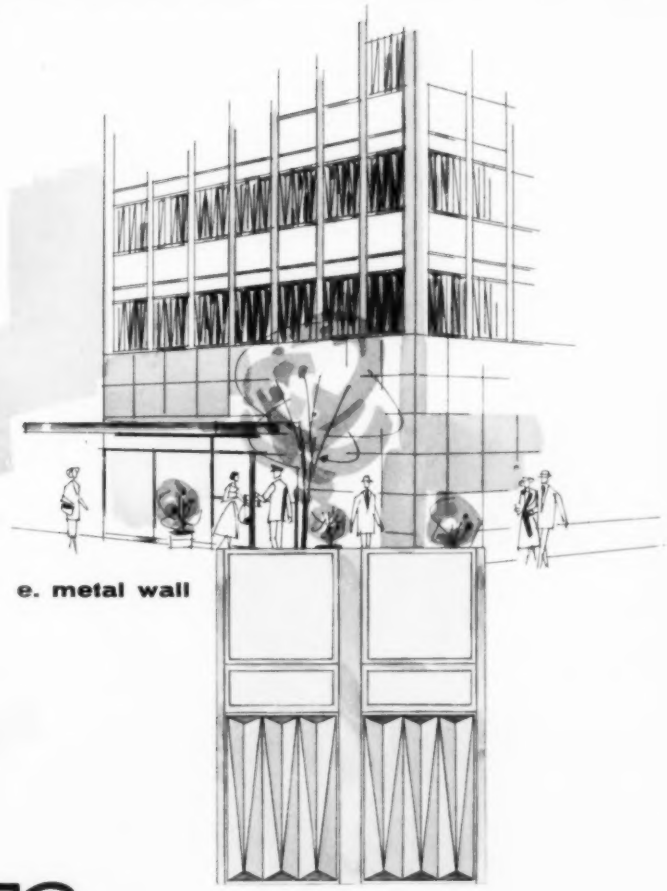


c. sun control products

d. facing material



f. unit wall



e. metal wall

Kawneer

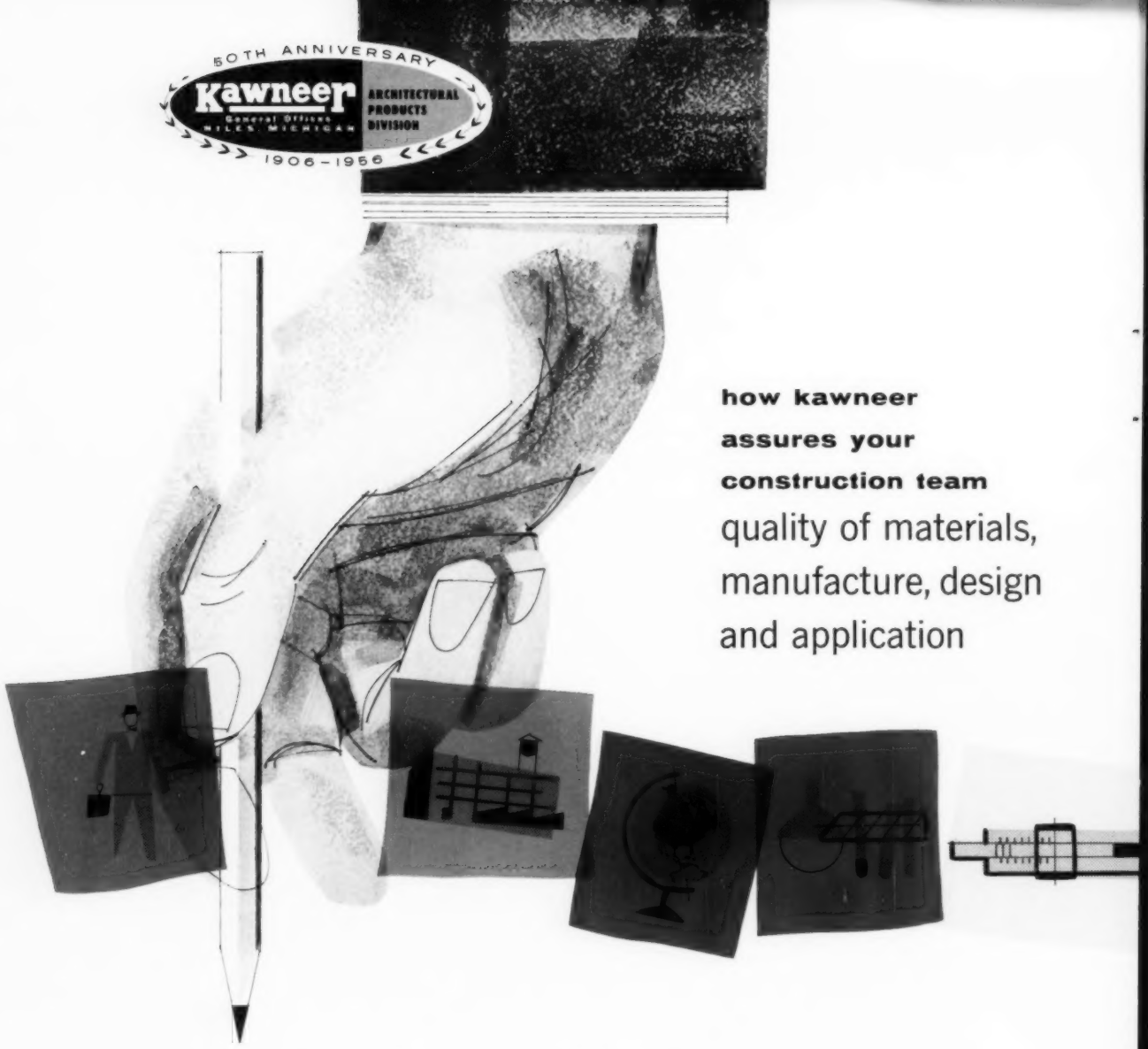
50TH ANNIVERSARY

Kawneer

General Offices
NILES, MICHIGAN

ARCHITECTURAL PRODUCTS DIVISION

1906–1956



how kawneer assures your construction team quality of materials, manufacture, design and application

110 Field Representatives
A group of men thoroughly experienced in every phase of architectural metal work. They work with you and for you. Their job is to help adapt Kawneer products to your jobs.

12 Factories—Warehouses
Nationwide warehousing in factories and warehouses assures Kawneer customers quick service. Materials are just a few hours away from any job. Your jobs get done faster, more efficiently and economically.

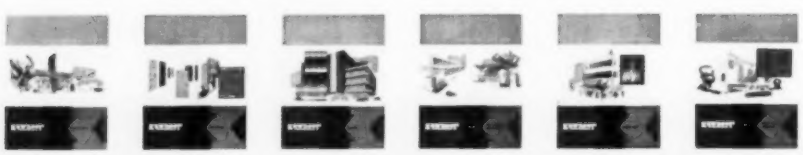
Nationwide Service
1200 factory-trained dealers in towns and cities throughout the U. S. and Canada are on the job to service you. Their metal inventories and skills assure you a finished job in accordance with your plans.

50 Years of Production
This experience provides a storehouse of building front information, ideas and know-how. It's at work on your job from beginning to end, solving problems and working out new ways to help you.

Research and Development
A special department devoted to architectural products development and design. A crew of designers and research engineers who know the building field help your ideas grow.

Engineering Job Applications
Kawneer endeavors to help the architect and builder control construction costs wherever possible. By factory pre-assembly of metal wall units, for example, erection time can be predetermined to establish a fixed cost.

Out front for 50 years with the Kawneer Touch

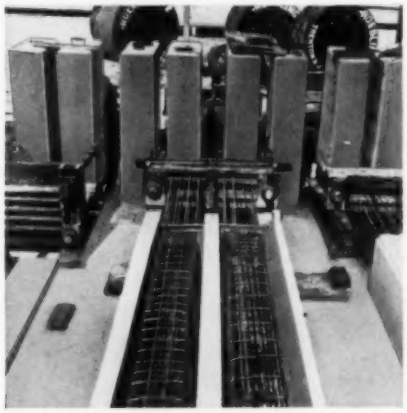


Printed in U.S.A.

A-60

STANDARDIZED PRESTRESSED BRIDGE MEMBERS PAY OFF IN FLORIDA

Cortez Bridge, near Sarasota, Florida. 50 spans at 48'-0", 24' roadways, two 5'-0" sidewalks. Six 3'-4" deep I girders per span, each stressed with nine 7/16" diameter Roebling 7-wire stress-relieved pretensioned strands, and one post-tensioned Freyssinet cable using Roebling prestressed concrete wire. Poured-in-place deck slab forms composite section with girders to carry live load. 20" square piles stressed with eighteen of Roebling's 7/16" diameter strands have maximum length of 62'. Prestressed members fabricated by Florida Prestressed Concrete Co., Inc. of Tampa, Florida. Erection by Bay Dredging and Construction Company.



Pouring square pre-tensioned piles for Turnpike Bridges at plant of R. H. Wright & Son, Ft. Lauderdale, Florida. Production at this plant is well along with a requirement for 600 pre-tensioned bridge girders and over 200,000 linear feet of pre-tensioned piling.

In a recent lecture before the Thirty-Fifth Annual Meeting of the Highway Research Board, Mr. W. E. Dean, Assistant State Highway Engineer of the State of Florida, reported the following facts concerning the use of prestressed concrete for bridges in his State:

Florida has established three standard pre-tensioned bonded prestressed concrete girder sections which accommodate all loadings and all span lengths from 25 to 60 feet.

Engineers of the Florida Turnpike Commission have adopted the State's standard girders as alternates for I beams on all bridges where they are applicable on the new Turnpike. To December 15, 1955 bids were received on 22 bridges with 35 to 55 foot spans. On 13 bridges the prestressed alternate was low, for a total saving of $93,000. On the other nine the I beam alternate was not even bid.

On 10 typical projects let by the Florida State Road Department in 1954 and 1955 totaling 546 spans, prestressed concrete was lower than the I beam or reinforced alternate in each case.

Most of the prestressed bridges as well as many longer and shorter spans not of prestressed concrete are being supported on Florida's standard pre-tensioned bonded piles.

Roebling engineers will be glad to cooperate with you to help assure top results on any type of prestressed concrete application. Write Construction Materials Division, John A. Roebling's Sons Corporation, Trenton 2, N. J.

ROEBLING

Subsidiary of The Colorado Fuel and Iron Corporation CF&I

Waldorf-Astoria floor maintenance figures show carpet cuts cost 78.5%

Cost figures prove that carpet can save your clients as much as 78.5% on maintenance costs.

Figures for all types of traffic areas, from light to very heavy, in the Waldorf-Astoria, a Hilton Hotel, show that it costs $189 per year to maintain 1000 square feet of carpeted floor space.

To maintain an equivalent area of non-carpeted floor space, this figure jumps to $880 a year. Carpet averages a savings of $691 a year per 1000 square feet.

This vast difference in costs exists because carpet is so much easier to clean. Soil stays loose in the pile – routine vacuuming can easily remove it. Less labor and equipment are needed. Just one operation – no scrubbing, no waxing, no buffing. Dirt doesn't grind in and there's no gloss to wear off.

Carpet looks better longer, too. It's amazing durability is due to the resiliency that makes it yield with pressure, spring back when pressure is released. Carpet looks soft – wears hard. In addition, carpet reduces noise and provides slip-proof footing. It is your best choice for a more relaxed, more efficient, more beautiful floor covering specification.

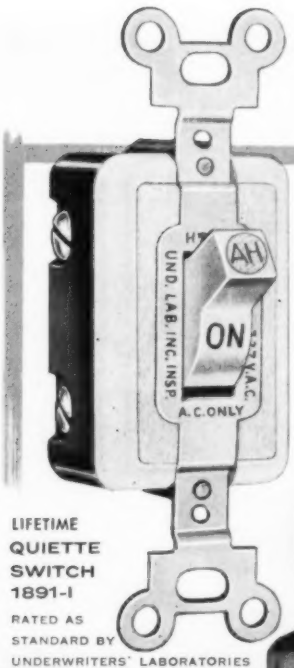
Cut your clients' floor maintenance costs with carpet. Send for your file copy of "Cutting Costs With Carpet." Write Dept. A2, Carpet Institute, Inc., 350 Fifth Avenue, New York 1, N. Y.

Specify carpet designed and made for the American way of life by these American manufacturers

Artloom • Beattie • Bigelow • Cabin Crafts-Needletuft • Downs • Firth • Gulistan • Hardwick & Magee • Hightstown • Holmes Karastan • Lees • Magee • Masland • Mohawk • Nye-Wait • Philadelphia Carpet • Roxbury • Sanford • Alexander Smith

CARPET INSTITUTE, INC., 350 Fifth Avenue, New York 1, N.Y.

A Touch of Quality in every room helps sell these quality homes . . .



LIFETIME QUIETTE SWITCH 1891-I
RATED AS STANDARD BY UNDERWRITERS' LABORATORIES

ARROW AH HART

Quiette
LIGHT SWITCHES

"We've switched to ARROW-HART *Quiette* LIGHT SWITCHES . . . they help make the sale."

Say Georgia Builders, Dean Spratlin and Bert Millard of SPRATLIN-MILLARD CO.

In quality homes – $18,000-$25,000 – now being constructed to complete the 180-home Mt. Vernon Woods development in Atlanta, Ga., quality Arrow-Hart Quiette Light Switches are being used . . . ***exclusively.***

This builder reasons . . . it's easier to sell a quality home when the prospective buyer can see – in every room – a quality feature that testifies to the over-all quality of the home.

Arrow-Hart Quiette Switches for residential use – Lifetime or Junior – quietly and safely operate both incandescent and fluorescent lights and appliances through dependable mechanical action. They make a good impression on quality-conscious prospective purchasers . . . ***and they'll make your homes easier to sell!***

Write for free folder (Form No. A-198) describing the complete Arrow-Hart Quiette Switch line. Dept. AR

Two of the luxury homes in the 180-home Mt. Vernon Woods development, Atlanta, Ga., where Arrow-Hart Quiette Switches make the homes more desirable . . . more salable.
Builder:
Spratlin-Millard Co., Box 237 – Sandy Spring (Atlanta), Georgia.
Architect:
John W. Cherry, 1429 Peachtree St., Atlanta, Ga.
Electrical Contractor:
Boles & Womack, Inc., Atlanta, Ga.

ARROW AH HART

Wiring Device Division
THE ARROW-HART & HEGEMAN ELECTRIC CO.
103 Hawthorn Street, Hartford 6, Connecticut
Offices, Sales Engineers and Warehouses in Principal Cities

Quality WIRING DEVICES • MOTOR CONTROLS • ENCLOSED SWITCHES • APPLIANCE SWITCHES

SERIES 200
New by
NEW CURVED DESIGN LOUVER
directs air right where it's
needed — prevents see-thru.
Solid section, all aluminum.

TITUS

Completely Adjustable

OUTLET GRILLE

FOR CEILING and SIDEWALL INSTALLATIONS

Here's the newest development for efficiently controlling the diffusion of forced air. It's the first truly "convertible" ceiling and sidewall diffusion grille . . . *THAT'S EQUALLY EFFICIENT WHEN HANDLING EITHER COOLED OR HEATED AIR.*

Greater free area and *individual louver adjustment* make this amazing performance possible.

Installation requires less labor. Requires no unhandy equipment to convert from cool to heated air. Just a simple matter of moving the louvers. Equally adaptable to old or new installations.

Mail the coupon today and learn how the new Titus "Series 200 Outlet Grilles" can *help you save money on every installation requiring sidewall or ceiling diffusion.*

New FREE CATALOG

TITUS MFG. CORP. • Waterloo, Iowa

Gentlemen: Please rush me FREE catalog on new TITUS CEILING AND SIDEWALL OUTLET GRILLES which are creating a new design trend.

Name

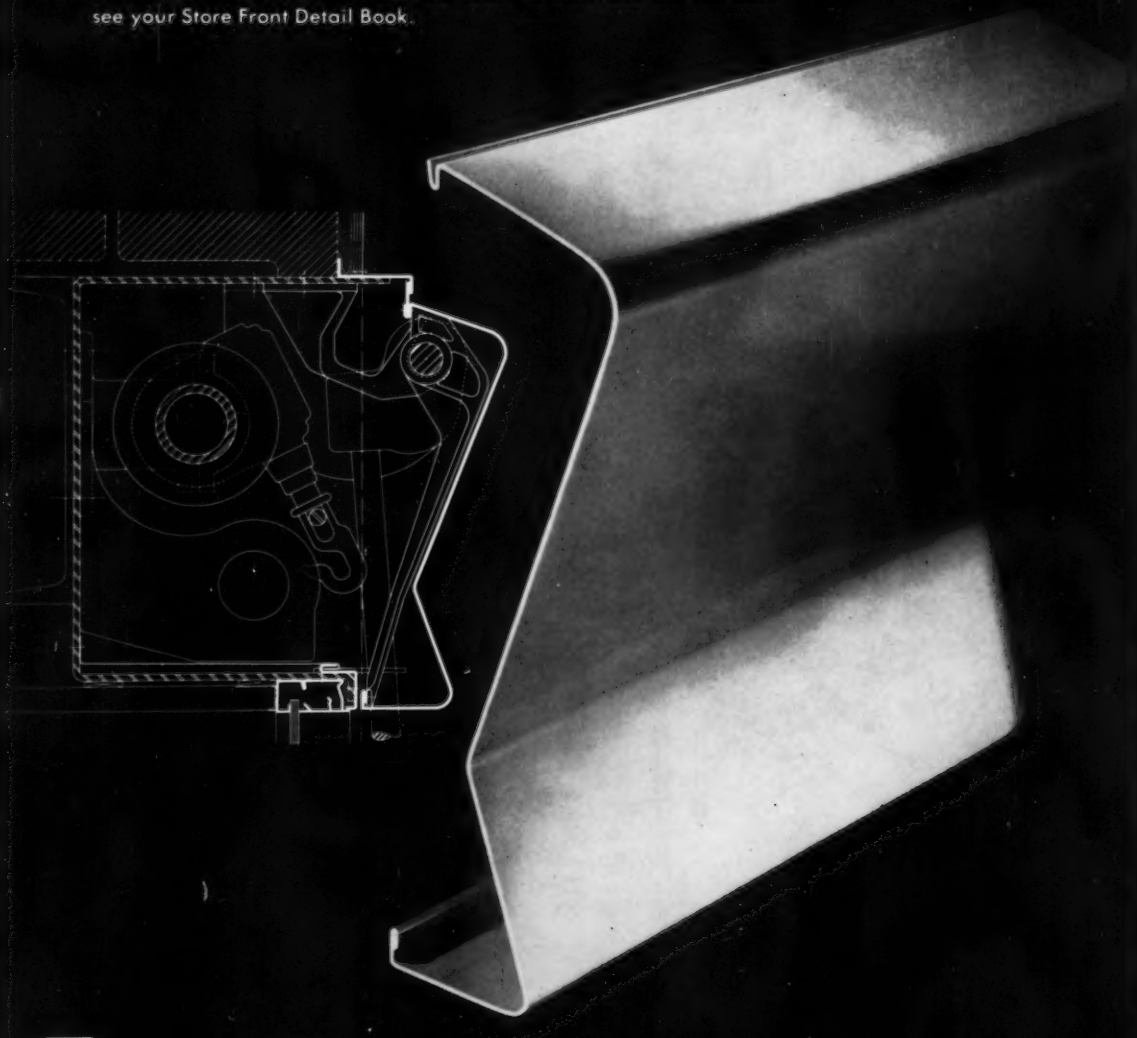
Company

Address

City State

New Pittco NO. 90 Awning Bar

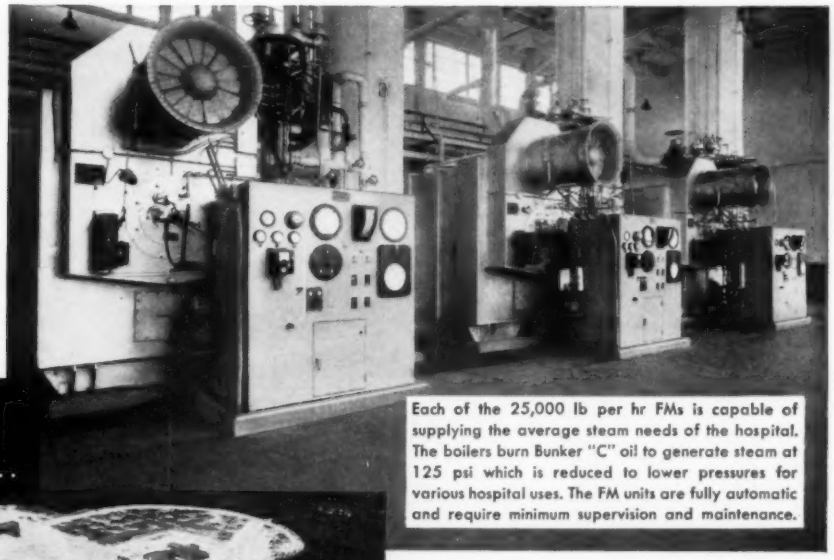
. . . combines beauty and function. The photograph shows how the profile creates a pleasing balance of light and shadow. The Pittco No. 90 Awning Bar will give added character to a store front, window or entrance. Factory or field fabricated. For complete information, see your Store Front Detail Book.



PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

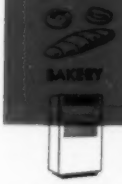


Each of the 25,000 lb per hr FMs is capable of supplying the average steam needs of the hospital. The boilers burn Bunker "C" oil to generate steam at 125 psi which is reduced to lower pressures for various hospital uses. The FM units are fully automatic and require minimum supervision and maintenance.

cutting steam costs . . .

Airview of Ancora indicates size and facilities of this ultra-modern medical center. Its 800 professional staff members will serve 2700 patients housed in 22 major buildings.

For all steam needs
NEW JERSEY STATE HOSPITAL
depends on 3 B&W FM Boilers



Three B&W Integral-Furnace Boilers are used to assure the reliable steam source required by this huge new medical center at Ancora, N. J. The FMs supply steam through a 6-mile, high-pressure steam main to a coordinated system of fresh-air conditioning, heating, and ventilating, that provides the ideal environmental conditions considered essential to the recovery of patients. In addition, FM steam supplies the large laundry, kitchen, bakery, and sterilizing requirements throughout the institution's 22 major buildings. Sufficient steam capacity was engineered into the hospital plans by Charles Simkin & Sons, Inc., Engineering Contractors, to provide for possible future expansion.

Ancora is the latest hospital to "go FM," joining a long and fast-growing list of institutional, commerical, industrial, and residential users who insist upon the most dependable, efficient, and economical supply of steam. Available in standard sizes up to 40,000 lb of steam per hr and pressures to 235 psi, the B&W FM Boiler is also in service with moderate superheat and for higher operating pressures. For complete details write The Babcock & Wilcox Co., Boiler Division, 161 East 42nd Street, New York 17, N. Y.

CHECK THESE FM SAVINGS FEATURES

- Saves Erection Time and Cost
- Meets Wide Range of Service
- Handles Quick Load Changes
- Fast Steaming
- Low Maintenance
- Easy Accessibility
- Suitable for Outdoor Service
- Burns Oil and/or Gas
- Saves Fuel
- Saves Space
- Safe, Automatic Operation

G-745

BABCOCK & WILCOX

BOILER DIVISION

SHERARDUCT CONDUIT'S baked-on Shera-enamel interior coating makes fishing easier

Sherarduct's baked-on inside coating of Shera-enamel assures minimum friction between wires and conduit wall. And in addition to a smooth inside surface Sherarduct's accurately cut threads let conduit ends butt inside the coupling . . . eliminate gaps that interfere with easy fishing.

Sherarduct has other plus features as well. The Sherardizing process of dry galvanizing actually alloys commercially pure zinc with the conduit wall . . . fortifies Sherarduct against corrosion for life. Even the hills and valleys of every thread are zinc protected.

Write today for your free copy of the Sherarduct Facts Book. It shows why Sherarduct is galvanized conduit at its best.

Sherardizing is Galvanizing at Its Best . . . Sherarduct is Galvanized Conduit at Its Best

National Electric Products

PITTSBURGH, PA.

3 Plants • 10 Warehouses • 36 Sales Offices

NOW

...a **FULL** heating and cooling line with the **FULL** family buy-appeal of

FRIGIDAIRE

Year-Round Unit

Remote Duct Coil

Self-Contained Water-Cooled Unit

Remote Coil Blower Unit

Remote Air-Cooled Condensing Unit

AIR CONDITIONERS

Give Home-Buyers the Name they know best . . . and at the same time you will be giving them the things they want most—COMFORT, CONVENIENCE, CLEANLINESS, HEALTH and ECONOMY.

- **Complete line of GAS and OIL FURNACES . . . for basement, utility room, attic or crawl space installations.**
- **Complete line of AIR CONDITIONERS . . . for add-on, combination, self-contained and remote-type installations.**
- **Available for all kinds of homes—ranch, two-story, split-level and tri-level.**
- **Designed for homes in every price range.**

Vertical Upflow

Lowboy

Horizontal

FURNACES

Have you this FRIGIDAIRE Fact Packet?

This Architect and Builder's Portfolio of Frigidaire Products is filled with complete data on the entire line of Frigidaire "Full-Home" Conditioners—heating, cooling, year-round. Places every useful fact at your finger tips.

Write or wire for your packet today. FRIGIDAIRE DIVISION, *General Motors Corporation*, Dayton 1, Ohio.

FRIGIDAIRE FULL-HOME *Conditioners*

GENUINE GM GENERAL MOTORS VALUES

What this seal can mean to you

The quick way to end "bid peddling" is for you to require that subcontractors be named when general contractors submit bids.

In general, you're sure of those "subs" who belong to their national trade associations. By this membership, they imply conformance to the high standards of workmanship their associations develop.

Members of the National Association of Plumbing Contractors . . .

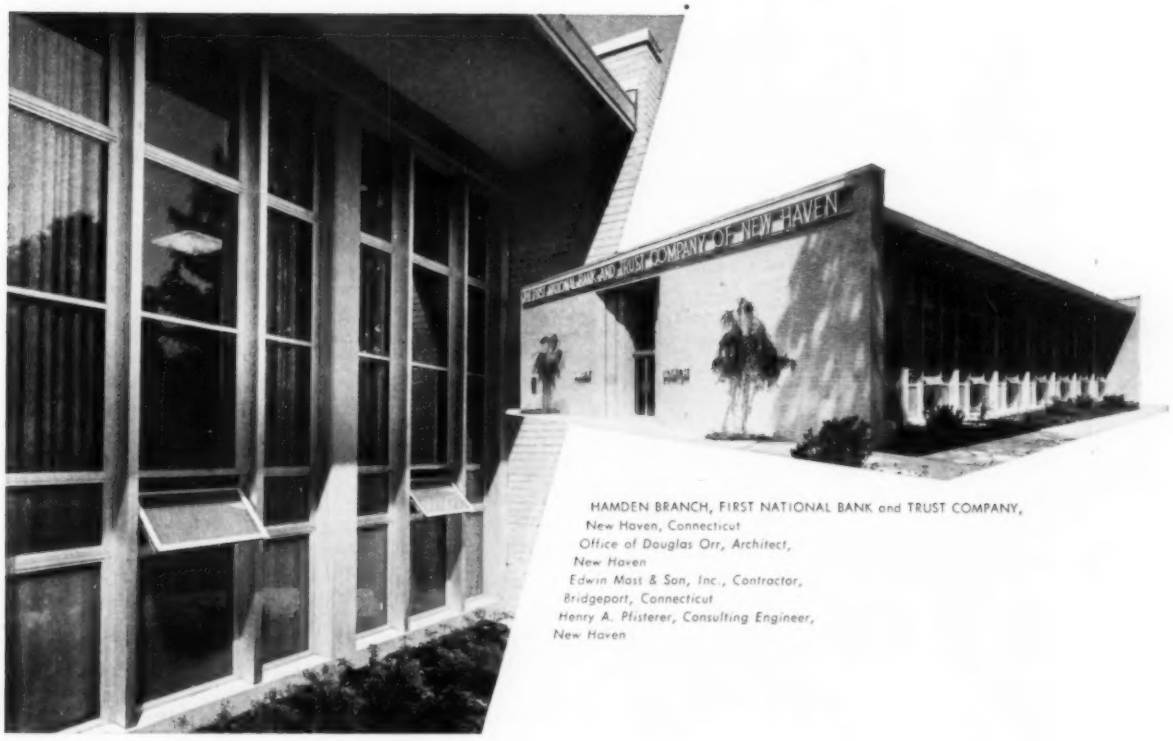
work to the highest standards in the country. Furthermore, they benefit from the vast store of specialized knowledge developed by N.A.P.C. research programs aimed at improving the safety and reliability of commercial and domestic plumbing systems. You can rely on plumbing contractors who display the N.A.P.C. seal.

Control quality throughout your buildings – know your "subs"!

NATIONAL ASSOCIATION *of* PLUMBING CONTRACTORS

1016 20th Street, N. W. Washington 6, D. C.

MODIFIED ALUMINUM CURTAIN WALL BY CUPPLES GIVES MONUMENTAL EFFECT AT MODEST COST...



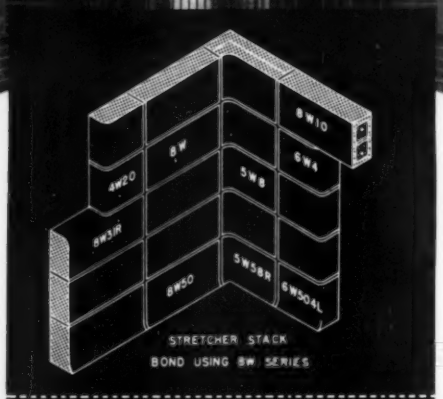
HAMDEN BRANCH, FIRST NATIONAL BANK and TRUST COMPANY,
New Haven, Connecticut
Office of Douglas Orr, Architect,
New Haven
Edwin Mast & Son, Inc., Contractor,
Bridgeport, Connecticut
Henry A. Pfisterer, Consulting Engineer,
New Haven

Here's an excellent example of the adaptability of Cupples' curtain wall construction to any structure, regardless of size.

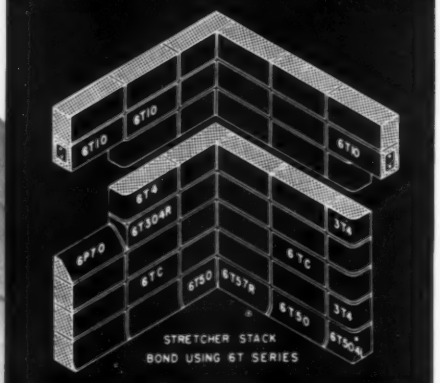
Both sides of this functional bank building are composed of Cupples' tubular aluminum mullions and double-weatherstripped, Thermopane-glazed fixed and projected windows. This modified curtain wall design gives an unusual three-dimensional effect and monumental appearance. And it is economical.

A leader in the design, fabrication and erection of aluminum curtain walls, Cupples, also, is one of the nation's largest manufacturers of commercial and residential aluminum windows, doors, Alumi-Coustic grid systems for suspended ceilings and special ornamental products. Our catalogs are filed in Sweet's.

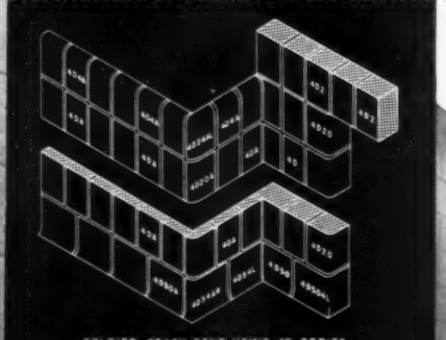
Cupples PRODUCTS CORPORATION
2658 SOUTH HANLEY ROAD • ST. LOUIS 17, MISSOURI



STRETCHER STACK
BOND USING 8W SERIES



STRETCHER STACK
BOND USING 6T SERIES



SOLDIER STACK BOND USING 4D SERIES

new data on stack bonds in STRUCTURAL CLAY FACING TILE

The drawings reproduced here are from new Technical Notes, prepared to help architects and contractors make proper use of Structural Clay Facing Tile in the currently popular stack bonds.

These informative "Tech Notes" cover specification of units, layout, bonding and other techniques required to gain the design effects desired when Facing Tile is laid up with continuous vertical and horizontal joints.

To get your free copy, write us on your letterhead or send the coupon below.

Facing Tile Institute, Dept. AR-56
2556 Clearview Avenue, N.W.
Canton 8, Ohio

Please send me "Technical Notes on Stack Bonds in Structural Clay Facing Tile".

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

FACING TILE INSTITUTE

2556 Clearview Avenue, N. W., Canton 5-2329, Canton 8, Ohio

In the interest of better Facing Tile construction these companies have contributed to this advertisement.

CHARLESTON CLAY PRODUCTS CO.
Charleston 22, West Virginia

THE CLAYCRAFT CO.
Columbus 16, Ohio

MAPLETON CLAY PRODUCTS CO.
Canton, Ohio

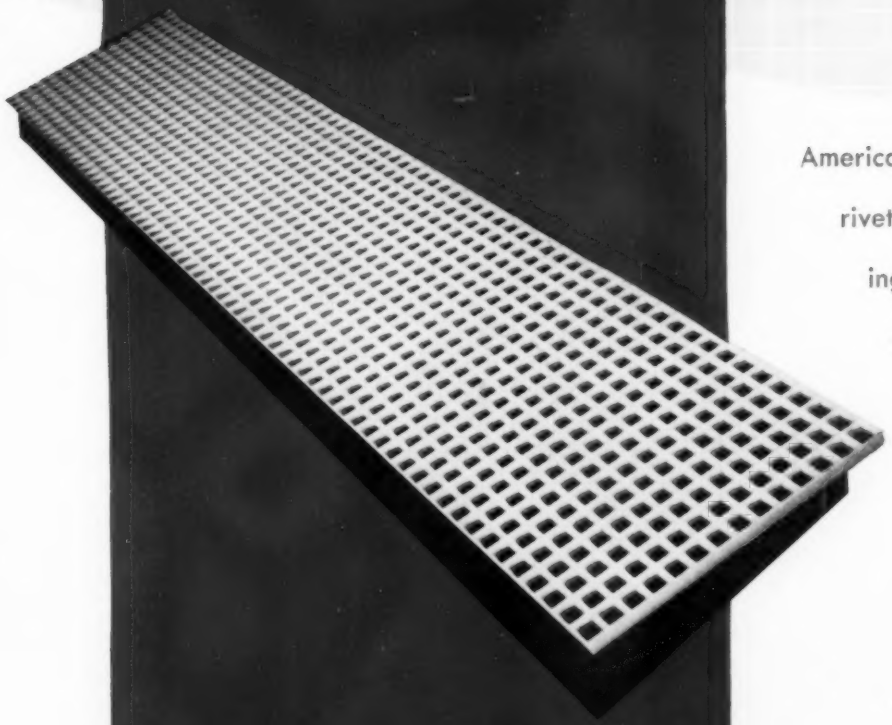
METROPOLITAN BRICK, INC.
Canton 2, Ohio

McNEES-KITTANNING CO.
Kittanning, Pennsylvania

NATCO CORPORATION
Pittsburgh 22, Pennsylvania

STARK CERAMICS, INC.
Canton 1, Ohio

WEST VIRGINIA BRICK CO.
Charleston 24, West Virginia



plastic louvers

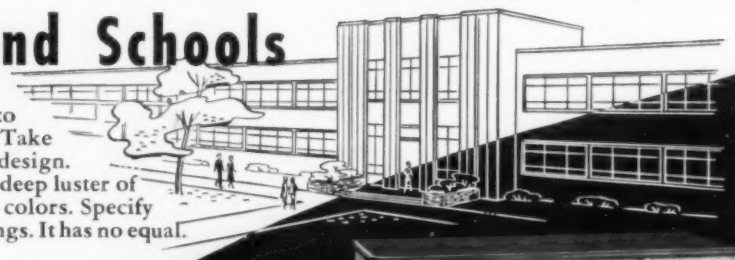
American louvers have no welding or riveting, allow the architect or lighting engineer full scope for his creative designing. They can be used as individual fixtures, as full ceilings, or in modular patterns of any design. When used in luminous ceilings, American louvers trap and reduce noise. Open construction gives freedom of air flow, helps diffuse heat or air conditioning —allows free operation of sprinklers.

You owe it to yourself to investigate this new plastic lighting medium. Write today for your free copy of the booklet, "Plastics in Modern Lighting."

LOUVER COMPANY

4845 NORTH ELSTON AVENUE, CHICAGO 30, ILLINOIS

Steel Furniture for Contemporary Offices and Schools



All ASE products are of finest quality to complement your architectural talent. Take time to see the simple dignity of ASE design. Examine the fine craftsmanship . . . the deep luster of the finish . . . the good taste in modern colors. Specify ASE steel furniture for your new buildings. It has no equal.

As Modern as Today!

Executive Furniture Finishes—Sea Gray, Bronze Tan, and Ebony. Also available in Dawn Gray, Stylite Tan, Mist Green and Green.

Better Built for Better Business

ALL-STEEL EQUIPMENT INC., Aurora, Illinois

WRITE FOR COMPLETE INFORMATION, THERE'S AN ASE DEALER NEAR YOU

Bruce S. Blietz, V. P. of Irvin A. Blietz Organization, nationally known builders, takes 5 minutes to find out how FIAT Shower Floors make better showers possible at lower cost.

Learn the *money-saving method* for better shower construction

The cross section sample being shown in the photograph above clearly and simply demonstrates why the FIAT PreCast method of shower floor construction is the answer to an age old building design problem. It takes but a few minutes to see how this one-piece floor has many, many advantages over old fashioned, built-on-the-job shower floor construction. It is immediately evident that this solid, monolithic unit does away forever with any problems of leakage. The cut-away view shows how the integral flange forms a watertight seal between the floor and shower wall material (whether tile, plaster, wallboard or structural glass). You can examine how the drain is cast permanently into the floor material and how the inclined floor and raised shoulders deflect water downwards toward the drain. You will appreciate the substantial savings of on-the-job labor and understand why the low installed cost of a PreCast FIAT Floor makes all other shower floor methods obsolete.

See it Now!

It's so much easier to see the advantages than to read about them. That's why we would like just five minutes of your time to show you this cross section sample. You can save real money and do a better job at the same time. Clip coupon to your letterhead and get full information. No obligation of course.

FIAT METAL MANUFACTURING CO.
9319 Belmont Ave., Franklin Park, Ill.

☐ Please have representative contact me.
☐ Send further information on PRECAST SHOWER FLOORS

Name_____

Company_____

Address_____

City_____ State_____

Type of Business_____

FIAT.

FIAT METAL MANUFACTURING CO.

Since 1922... First in Showers / *Packaged Showers • Doors • Floors Toilet Room Partitions*

FOUR COMPLETE PLANTS: Long Island City 1, N. Y.; Franklin Park, Ill.; Los Angeles, Calif.; Orillia, Ontario

ANOTHER RIXSON FIRST!

a floor type closer with Underwriters' Laboratories Approval

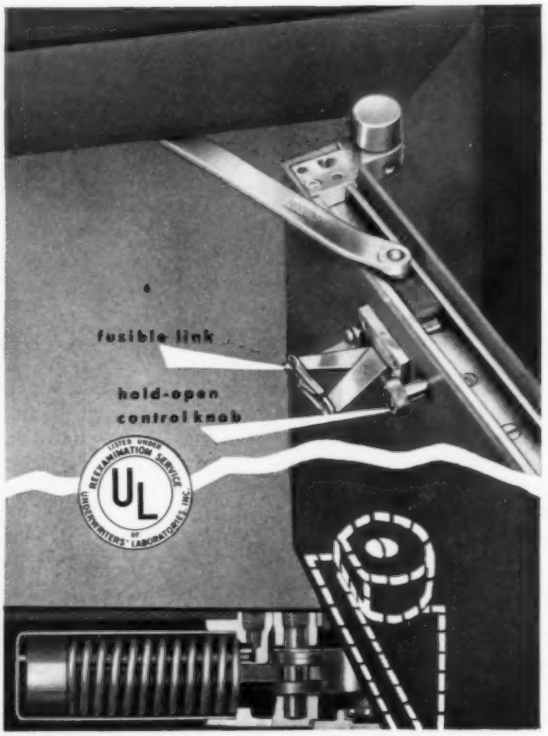
RIXSON Uni-checks, N.H.O.(no hold open), the smooth functioning door closers that are installed in the rigid floor . . . have the approval of the Underwriters' Laboratories for fire doors, when furnished with a special iron ball bearing top pivot.

RIXSON UNI-CHECKS with no. 36 fusible link hold-open arm

ideal for interior fire doors

The special U.L. approved RIXSON Uni-check can be supplied with a hold-open that also has Underwriters' Laboratories approval. The RIXSON no. 36 hold-open arm (illustrated) holds the door at 90°. In case of fire the fusible link releases at 160°F and the door closes automatically. A firm push will also close the door. The hold-open is easily engaged or disengaged by a turn of the control knob.

specify* RIXSON *throughout



write for details

THE OSCAR C. RIXSON COMPANY

9100 west belmont avenue • franklin park, ill.

AZROCK® CORK TERRAZZO TONES

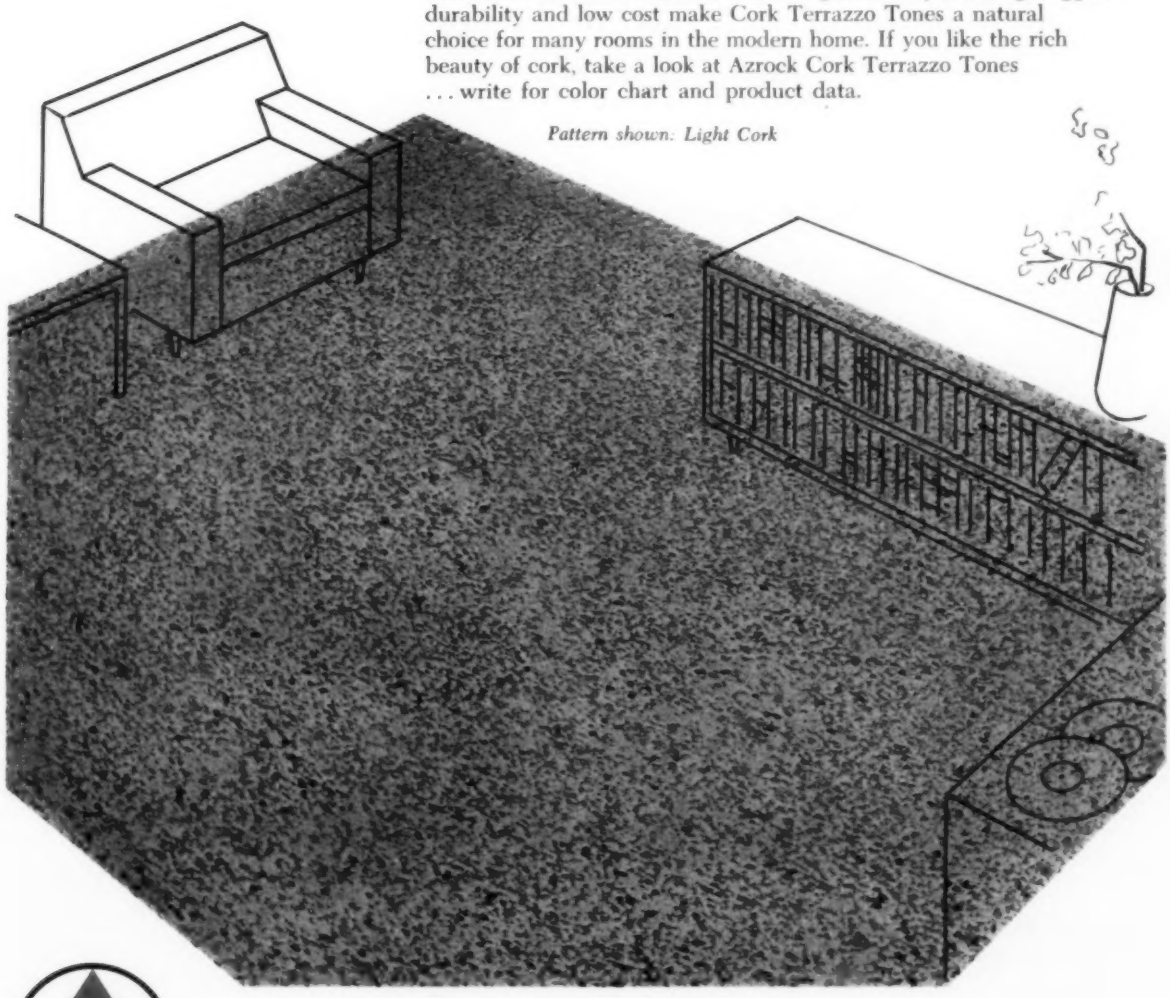
floors that look like cork . .

cost like asphalt tile

Cork Terrazzo Tones come in the two most popular shades of actual cork flooring, light and medium. Installed separately or in pattern with each other, these two shades make possible warm, beautiful floors in authentic cork tones.

This luxurious-looking asphalt tile can be quickly and safely installed on concrete slabs on or below grade. Easy cleaning, rugged durability and low cost make Cork Terrazzo Tones a natural choice for many rooms in the modern home. If you like the rich beauty of cork, take a look at Azrock Cork Terrazzo Tones . . . write for color chart and product data.

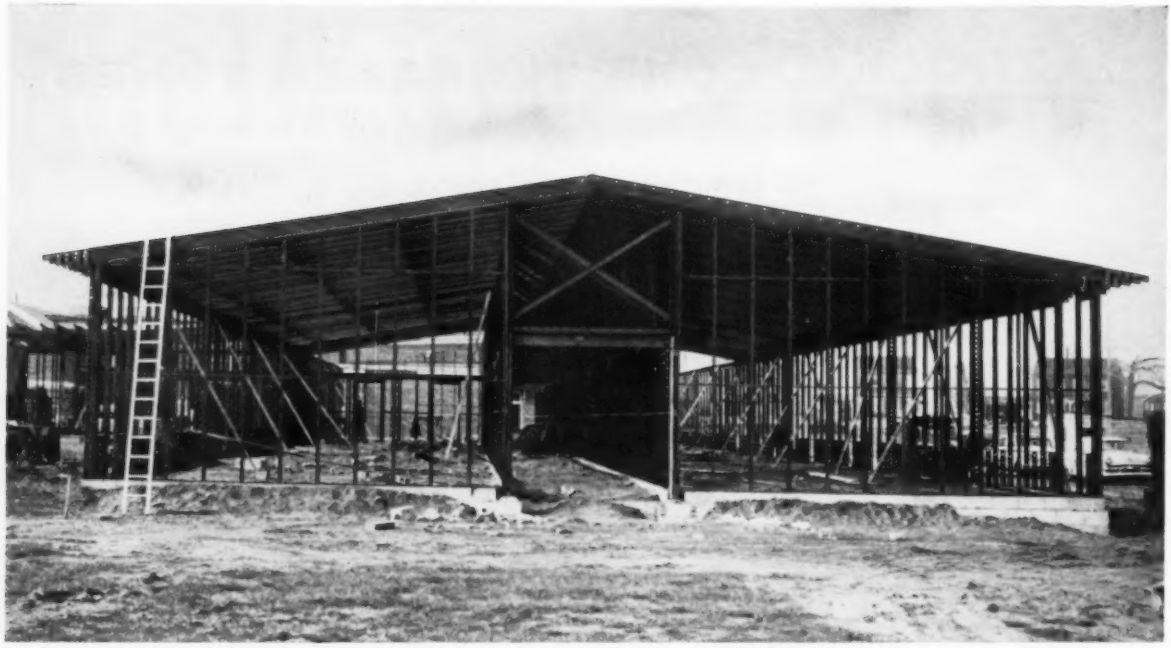
Pattern shown: Light Cork



AZROCK FLOORING PRODUCTS

AZROCK PRODUCTS DIVISION • UVALDE ROCK ASPHALT CO.

563 Frost Bank Building • San Antonio, Texas • Makers of Vina-Lux • Azrock • Duraco • Azphlex



how LIGHTSTEEL cut cost of school addition to $14,500 per classroom

When Architect Alfonso Alvarez was confronted with the need for 16 classrooms, but had only $251,000 available, cost was his major consideration in the design of the new addition to New Jersey's Freehold Township School.

Comparative cost analyses were made of a number of types of construction. From the results of these studies it was decided to build the addition with Penmetal LIGHTSTEEL structural sections. The economy of this framing system is shown by the following figures, based on a contract cost of $232,004: Cost per pupil – 360 pupils – $644; Cost per classroom –, with 4 unfinished rooms – $14,500; Cost per sq. ft. $13.65.

Economical to buy, LIGHTSTEEL sections also cut actual erection costs. Because they are light in weight, steel members for load-bearing partitions and roof joists could be shop-assembled . . . then trucked to the job site for immediate placement.

Other savings were obtained by means of the nailing grooves in double studs and joists. By utilizing this feature, exterior sheathing, metal lath and acoustical tile could be nailed directly to the steel sections.

Although low in cost, the quality of construction was not sacrificed. The structure offers excellent resistance to fire.

Write for details of economical Penmetal LIGHTSTEEL framing.

PENN METAL COMPANY, INC.

General Sales Office: 205 East 42nd St., New York 17, N. Y.
Plant: Parkersburg, W. Va.
District Sales Offices: Boston, New York, Atlanta, Philadelphia, Pittsburgh, Charlotte, Chicago, Detroit, St. Louis, Minneapolis, Denver, Dallas, Little Rock, Seattle, San Francisco, Los Angeles, Parkersburg

PM-101

Penmetal

FREEHOLD TOWNSHIP SCHOOL
Monmouth County, New Jersey
County Superintendent: Earl B. Garrison
Architect: Alfonso Alvarez, Architect and Associates, Upper Montclair, N. J.
General Contractor:
Highland Park Construction Company

GOOD workmanship is one of the most important factors in preventing leaky brick walls.

Good workmanship includes wetting the brick, securing full head and bed joints, backplastering the face brick—*and laying the brick carefully to keep the bond. The position of the brick should never be shifted after the mortar has stiffened.*

Expect trouble when brick are shifted or tapped into place after the mortar has stiffened. Cracks will result and the wall may leak.

Brixment mortar has high water-retaining capacity. It resists the sucking action of the brick. It stays plastic and workable longer. Brixment mortar therefore makes it easy for the bricklayer to lay the brick accurately, before the mortar has stiffened.

Brixment mortar has great plasticity, high water-retaining capacity and bonding quality, great resistance to freezing and thawing, and freedom from efflorescence. Because of this *combination* of advantages, Brixment is the leading masonry cement on the market.

BRIXMENT

LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

FIRE SAFETY . . . How important is fire resistance in an acoustical material?

When it comes to fire safety, the first concern is to satisfy local building codes. Although they vary, most codes offer considerable freedom in the selection of acoustical materials. Unless the codes are closely studied, it's easy to specify incombustible materials where they are not required. This may increase your costs substantially and needlessly.

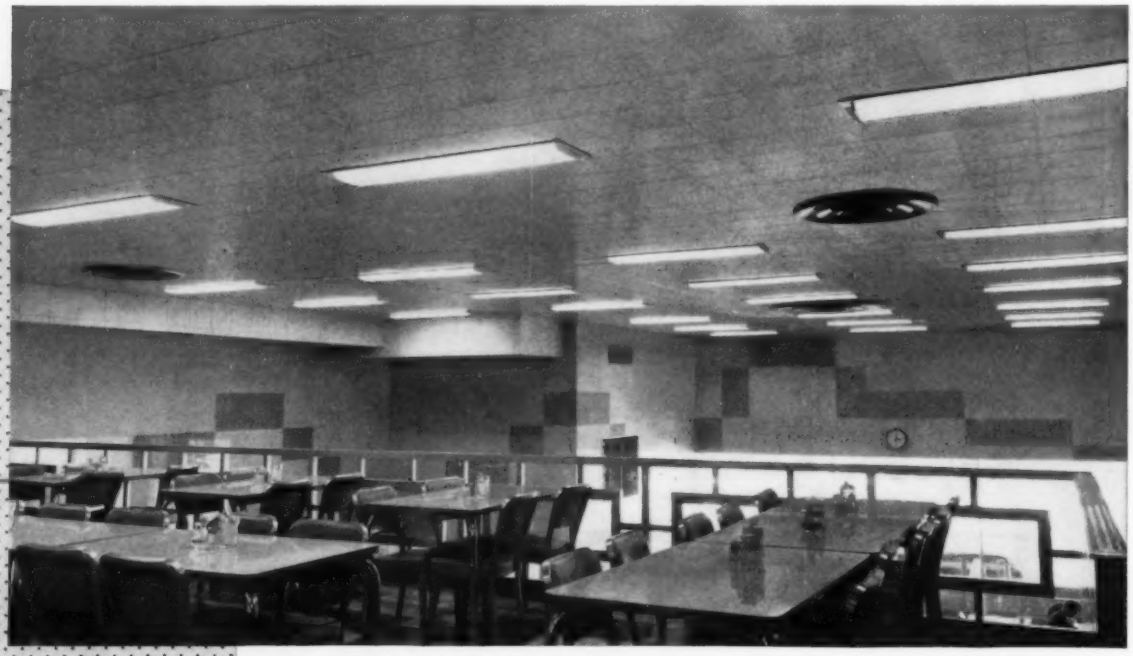
For instance, a building code in a large eastern city allows up to 2,000 sq. ft. of a combustible wood fiber material to be installed in a fireproof building, provided the area is enclosed by fireproof walls and doors. If the wood fiber tile has a fire-resistant paint finish, which is available with Armstrong Cushiontone, up to 5,000 sq. ft. can be installed.

In the larger, more open areas of public buildings, the safeguarding of human life is never to be minimized. That's why most building codes require that incombustible materials be used in critical areas that might contribute to the spread of fire.

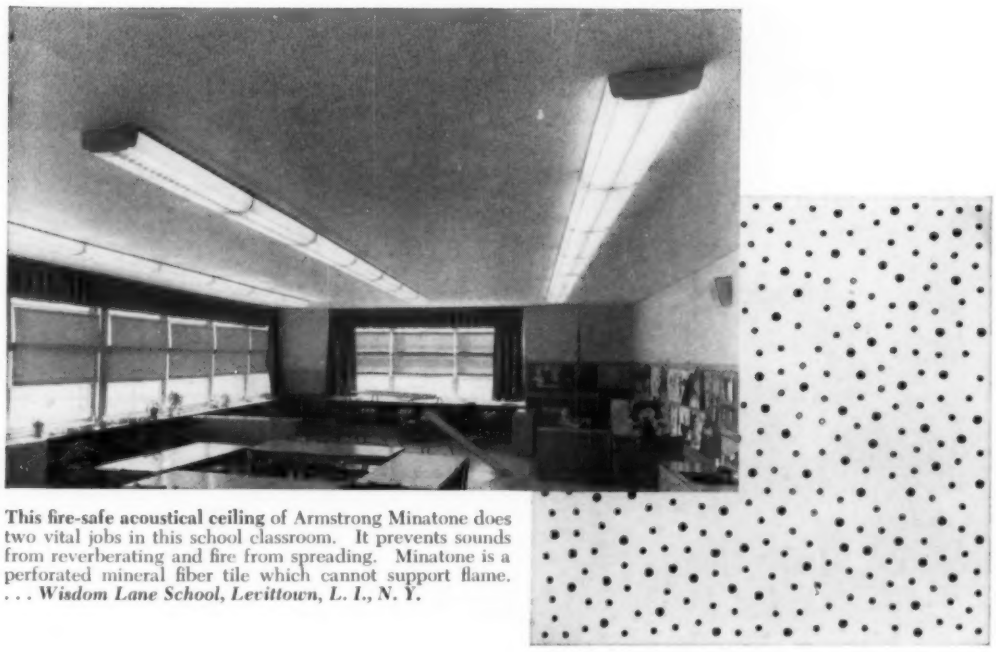
In large areas, you can still realize the economics of wood fiber tile. Fire-resistant Cushiontone can be used in school classrooms. Armstrong Minatone, an incombustible tile that is an identical twin of Cushiontone in appearance, can be used in corridors.

Five Armstrong materials – Travertone, Minatone, Crestone, Arrestone, and Perforated Asbestos Board – are incombustible. While they can't do the entire job of "fireproofing" an area, they can act as a fire stop.

For additional data on fire safety and the many other factors that influence acoustical selection, write for the free booklet, "Armstrong Acoustical Materials." Armstrong Cork Co., 4205 Rock Street, Lancaster, Pa.



Diners are protected from noise and fire in this cafeteria by an Armstrong Arrestone ceiling. Arrestone is a metal pan unit backed up by a mineral wool pad. Both pan and pad are incombustible and have a noise-reduction coefficient of .85. Installed by mechanical suspension, Arrestone conceals pipes, ducts, and other utilities.
. . . Forum Cafeteria, Wichita, Kansas



This fire-safe acoustical ceiling of Armstrong Minatone does two vital jobs in this school classroom. It prevents sounds from reverberating and fire from spreading. Minatone is a perforated mineral fiber tile which cannot support flame. *. . . Wisdom Lane School, Levittown, L. I., N. Y.*

Completely incombustible, this attractive ceiling of Armstrong Crestone also contributes to the distinctive beauty and acoustical excellence of this convention room. *. . . Seville Hotel, Miami Beach, Florida*

Quiet . . . beauty . . . and fire safety are contributed to this hospital room by the acoustical ceiling of Armstrong Travertone. Travertone's incombustibility, together with its handsome textured surface and high efficiency, makes it ideal for hospital offices, entrance lobbies, and corridors. *. . . St. Joseph's Hospital, Lancaster, Pa.*

Armstrong

ACOUSTICAL MATERIALS

Cushiontone® • Travertone* • Arrestone® • Minatone®
Corkoustic® • Crestone* • Perforated Asbestos Board

*TRADE-MARK

WALL-TYPE FIXTURES
reduce stadium washroom maintenance

AMERICAN-STANDARD Fixtures
supported on ZURN SYSTEM provide economical floor-free design

During the 1955 season, the Kansas City Athletics played to 1,400,000 baseball fans in their handsome new home stadium shown above. Designed for low-cost maintenance, customer convenience and comfort, all public and private washrooms in this modern stadium have American-Standard plumbing fixtures, supported by the Zurn System.

Because of the floor-free design of these washrooms, made possible by the smart combination of Zurn and American-Standard, two men can clean all washrooms at the amazingly low cost of $1.50 per game per washroom. This economy is doubly amazing because these washrooms include a grand total of 102 urinals, 91 water closets and 61 lavatories . . . all American-Standard and Zurn.

But improved sanitation, lower maintenance, and an always modern look are not the only advantages of using American-Standard wall-type plumbing fixtures, especially when you specify that they be installed on the Zurn System. This combination of superbly designed, handsomely styled fixtures and the Zurn System which rigidly supports them from *behind* the wall (thus relieving the wall of all the stress), also makes for easy, time-saving installations.

Architect: HARRY L. WAGNER & ASSOCIATES.

Consulting Engineer: J. B. DE RIGNE & ASSOCIATES.

Mechanical Contractor for Kansas City Stadium: WALDO PLUMBING & HEATING COMPANY.

SEND FOR YOUR COPIES—The American-Standard "Better Rest Room Guide" and the Zurn Booklet, "You Can Build It for Less a New Way."

Just fill in and mail the coupon today.

American-Standard
Dept. AR-56
Pittsburgh 30, Pa.

I would like to find out more about the simplified FLOOR-FREE design for modern rest rooms. Please send me your special booklets.

Name .....

Company .....

Address .....

City ..... State .....

AMERICAN-STANDARD PLUMBING & HEATING DIVISION
Pittsburgh 30, Pa.
J. A. ZURN MFG. CO. (Plumbing Division) Erie, Pennsylvania

ENGINEERING "KNOW HOW"

BORN OF EXPERIENCE

IS MIGHTY IMPORTANT IN DESIGNING CURTAIN WALLS

Another CURTAIN WALL by GENERAL BRONZE

Commercial Credit Building
Baltimore, Md.
Architects: Harrison & Abramovitz
Contractor: Consolidated Engineering Co.

Designing and producing curtain wall panels may look like a simple, easy job that anybody could do. Actually, it's a highly specialized type of construction that is full of pitfalls and problems for the inexperienced and unwary.

From more than 10 years' practical experience with 24 individual curtain wall jobs (including the United Nations Buildings, the ALCOA Building, Lever House, the Texaco Building, New Orleans, the Connecticut General Life Insurance Bldg., Bloomfield, Conn., and others), we at General Bronze have learned the answers to the many intricate problems that are a part of this highly specialized business. For instance, we have learned how to take care of expansion and contraction while keeping the building weathertight at all times, when and where flashings are necessary, how to integrate the window into the wall panel, how to design for trouble-free horizontal and vertical joints, etc.

If you are thinking of curtain walls in terms of aluminum, bronze or stainless steel skins, grids with aluminum windows and insulating panels of either colored alumilite or porcelain enamel, or stainless steel grids with glass panels, we offer you the benefits of our many years' experience in designing, engineering, fabricating and erection of curtain walls. Call in the General Bronze representative today. He is anxious to serve you. Our catalogs are filed in Sweet's, Section 17a/Ge.

GENERAL BRONZE CORPORATION • GARDEN CITY, N. Y.

PERMATITE DIVISION—Custom-built Windows, Architectural Metal Work and Revolving Doors. **ALWINTITE DIVISION**—Stock-size Aluminum Windows
BRACH MFG. CO. DIVISION—Multel, T. V., Radio and Electronic Equipment. **STEEL WELDMENTS, INC. DIVISION**—Custom fabrication in steel and iron.

TAHOE
K-2841-C,
24" x 18"

KOHLER

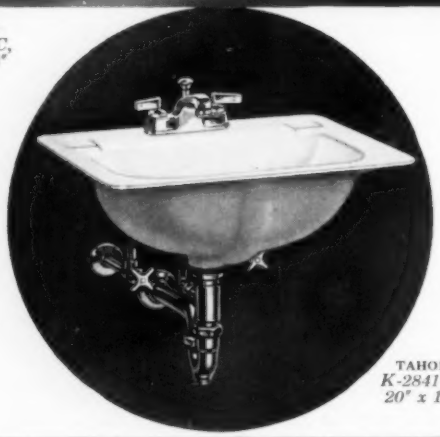
Tahoe

Enameled Cast Iron Lavatory for Building-in

The popular Kohler Tahoe in the 24-inch size provides the selling appeal of a spacious basin, shaped for comfortable use, in a first quality built-in lavatory for cabinets and counters. Flat, true rims make it easy to fit and install.

Other attractive features include a front overflow with chromium-plated brass ferrule, two integral soap dishes, and the convenient Centra combination fitting with aerator and Synchro pop-up drain.

The sparkling Kohler enamel is fused to a base of non-flexing iron, cast for rugged strength and rigidity. Available in pure white and six pastel colors. Kohler fittings, made expressly for the fixtures, match in style, quality and serviceability.



TAHOE
K-2841-C,
20" x 18"

First Quality Only

Each Kohler lavatory casting is inspected, before enameling, to make sure it is smooth and sound. All Kohler products are inspected thoroughly after every manufacturing operation.

Kohler Co., Kohler, Wisconsin. Established 1873

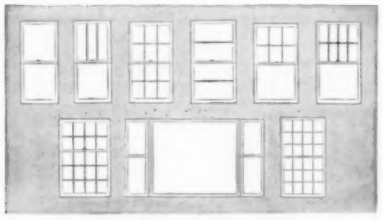
KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

The Peirce-Nichols House, Salem, Mass., built in 1782. Samuel McIntire, while in his early twenties and without any formal training in architecture, designed this house for a wealthy East Indian merchant of Salem, named Jerathmiel Peirce.

Double Hung Wood Windows Add Beauty to 174-Year-Old Peirce-Nichols Home

Relative inexpensiveness permits generous use of double hung wood windows with metal weatherstripping, even in the most modern homes.



An endless variety of design can be achieved with double hung wood windows. They are easily shaped and their surface receives and holds any type of finish.

Peirce was a man who could afford the best—and in this case got it, because this was considered about the finest wooden house in America. Not only was it McIntire's design, but every important piece of carving was done by his own hands, from the original urns that capped the fence posts to the doorways, cornices and mantels within. You can be sure it pleased Mr. Peirce.

Adding to the beauty and design of the Peirce-Nichols house are the double hung wood windows . . . permitting ample light and ventilation for every room. The natural insulating property of the wood helped keep the interior cool because the heat of the sun could not readily penetrate.

Today, double hung wood windows are still the most popular type of window for the modern home; and their efficiency has been increased by the addition of modern spring sash balance and metal weatherstripping to bring weather-tightness, seasonal adaptability, and economical maintenance.

Architects, builders and home owners know that double hung wood windows with metal weatherstripping are best for durability, structural correctness and operational efficiency.

WEATHERSTRIP *Research* INSTITUTE

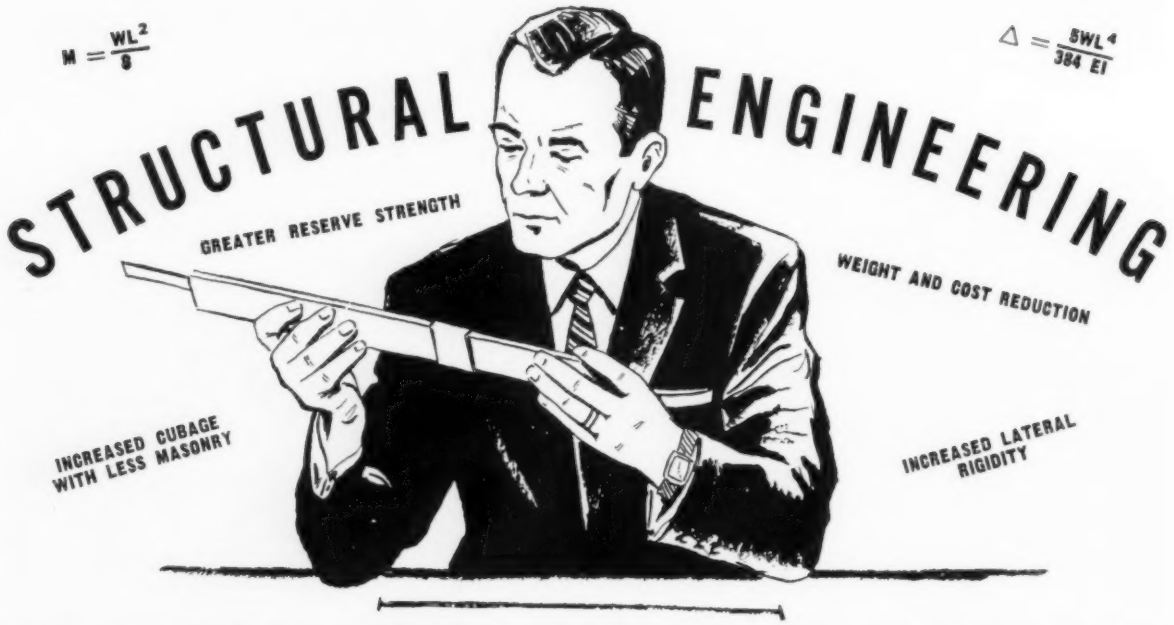
OFFICE OF THE SECRETARY, BOX 128—RIVERSIDE, ILLINOIS

MEMBERS:

ALLMETAL WEATHERSTRIP CO.
BARLAND WEATHERSTRIP MATERIAL CO.
CENTRAL METAL STRIP CO.
CHAMBERLIN CO. OF AMERICA
DENNIS & CO., W. J.
DORBIN METAL STRIP MFG. CO.
GARDNER WIRE CO.
MACKLANBURG-DUNCAN CO.
MASTER METAL STRIP SERVICE
MONARCH METAL WEATHERSTRIP CORP.
NATIONAL GUARD PRODUCTS, INC.
NATIONAL METAL PRODUCTS CO, INC.
NICHOLS METAL STRIP SERVICE
PEMKO MFG. CO.
PRECISION WEATHERSTRIP CO.
REESE METAL WEATHERSTRIP CO.
SOUTHERN METAL PRODUCTS CORP
WARNICA PRODUCTS
ZEGERS, INC.

$M = \frac{WL^2}{8}$

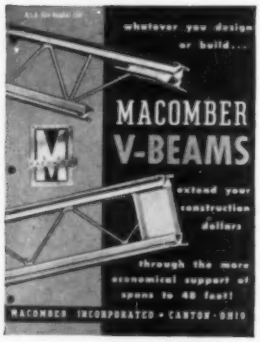
$\Delta = \frac{5WL^4}{384\,EI}$



HAS A NEW STANDARD OF PERFORMANCE

IN THE STRONGER, LIGHTER, MORE RUGGED

MACOMBER V-BEAM


whatever you design or build...
MACOMBER V-BEAMS
extend your construction dollars
through the more economical support of spans to 48 feet!
MACOMBER INCORPORATED • CANTON • OHIO

JUST WRITE V-BEAM ACROSS YOUR LETTERHEAD

PRODUCT ACCEPTANCE in structural engineering is based upon FACT.

1. WHO makes it? 2. WHAT will it do? 3. What are its STRUCTURAL advantages? 4. WILL it actually lower construction costs? 5. What is your performance PROOF?

HERE ARE YOUR ANSWERS: This MACOMBER product is the culmination of 40 years of structural product engineering. It was designed to support floors and roofs with a lighter, shallower structural member whose ultimate strength is over twice its published carrying capacity. In addition to the fact this member weighs less and costs less, it has the time and labor saving NAILABLE feature in both top and bottom chords. And lastly—every size in the various spans was load tested by Pittsburgh Testing Laboratory. YES! The phenomenal success of V-BEAMS is based upon fact. You can specify this structural member with complete confidence.

STANDARDIZED STEEL BUILDING PRODUCTS

MACOMBER INCORPORATED

CANTON 1, OHIO

• ENGINEERING • FABRICATING AND ERECTING •

NAILABLE STEEL JOISTS
•
LONGSPANS
•
BOWSTRING ROOF TRUSSES
•
METAL DECK
•
V-LOK STEEL FRAMING
•
STRUCTURALS

In the Presbyterian Village of Detroit...

Thoughtful design provides new comfort and safety for the aged!

Eljer fixtures play an important role in this totally new concept in "homes for the aged"!

Gone are the frightening, austere buildings . . . the impersonal dormitory life. In their place is a warm, inviting small-town atmosphere . . . a real community to brighten the "sunset" years of their lives.

Choosing the Eljer Legation Bath is typical of the advanced thinking that developed this project. The Legation permits a "sitting" shower, reclining bath and even a foot bath! The new 6"-wide side rim seat makes it easier and safer to enter and leave the bath.

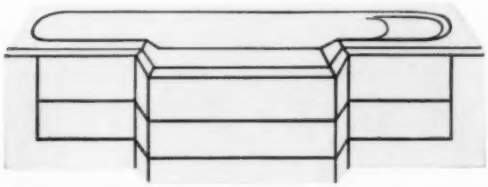
Eljer fixtures in cast iron, formed steel, and vitreous china are used throughout the project. And you can be certain that after decades of use, they will still remain lustrous and beautiful.

When you consider plumbing for any need . . . look to Eljer. For specifications and facts on this job-proved line of fixtures and fittings, write: Eljer Division of The Murray Corporation of America, Three Gateway Center, Pittsburgh 22, Pennsylvania.

ARCHITECT AND ENGINEER
Smith, Hinchman and Grylls, Inc.
Detroit, Michigan

GENERAL CONTRACTOR
Walter L. Couse & Co.
Detroit, Michigan

PLUMBING CONTRACTOR
Griffin Bros.
Redford, Michigan



Fixtures for every plumbing need

ELJER

DIVISION OF THE MURRAY CORPORATION OF AMERICA

THE ONLY NAME YOU NEED TO KNOW IN PLUMBING FIXTURES

Advertising and Circulation Office in the new building of the Camden, N. J., *Courier-Post*, designed by Louis T. Klauder and Associates, Philadelphia, architects. General contractor: Hughes-Foulkrod Co., Philadelphia.

LONGSPANS PROVIDE CLEAR WORK SPACE IN CAMDEN, N. J., NEWSPAPER PLANT

A maximum of unobstructed floor space was the main requirement when the Camden, N. J., *Courier-Post* built a new plant in Delaware Township, outside Camden. The architects provided open space, uncluttered by an excess of supporting columns, in the advertising and circulation departments, city room, composing rooms and shipping and storage areas, by specifying Longspan Joists in the roof structure.

The one-story building, with brick exterior, measures 450 ft by 160 ft. Well over 100 tons of Bethlehem Longspans, 55 ft long, were used in its construction.

The use of Bethlehem Longspans provided other

important advantages, too. Building costs were lowered, for the Longspans reached the job-site fully fabricated, clearly marked and ready for instant placing. And installation of overhead lighting and ductwork was greatly simplified, as pipes and conduit were run right through the open webs.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.
On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM LONGSPAN STEEL JOISTS

BETHLEHEM STEEL

Sterling HARDWARE®

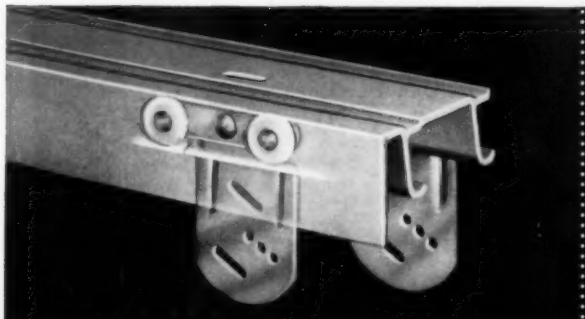
easier installation... smoother performance

for all sliding doors

GOES UP FAST

EXTREMELY QUIET

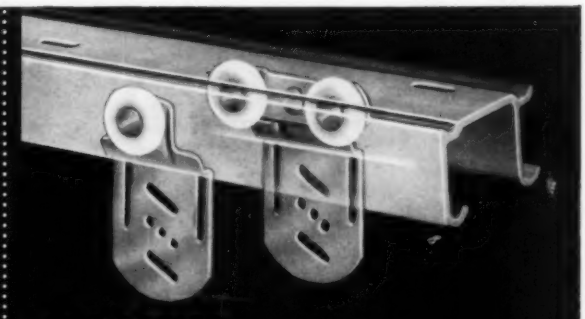
LONGER LIFE



600 SERIES

The Accepted Standard of Quality

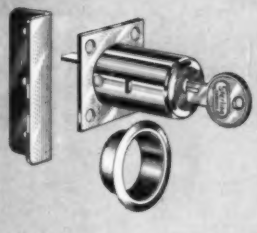
Satin finish aluminum track with built-in apron.
Adjustable hangers. Nylon wheels
with oiled-for-life bronze bearings.
Only 1" headroom required.



700 SERIES

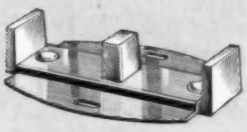
New, **Low Cost** *Track and Hangers*

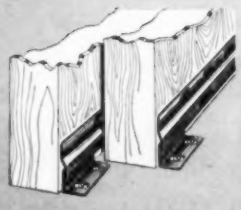
Large 1" Nylon wheels with oiled-for-life bronze bearings.
Single wheel hangers for doors of average weight.
Twin wheel hangers for doors of heavier weight.



1058
SLIDING DOOR LOCK

FLOOR GUIDE





876 GUIDE STRIPS

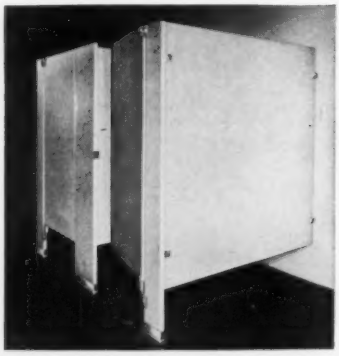
Send for our new 24-page catalog showing the most complete line of sliding door hardware and other builders' products or see our catalog in Sweet's Files.

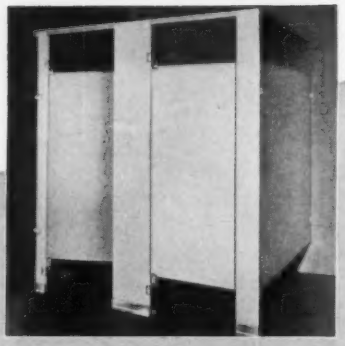
"Every Sterling product is guaranteed to be good"

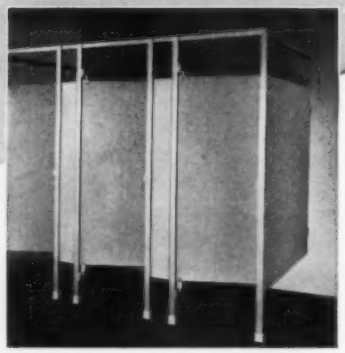
John Sterling
President

STERLING HARDWARE MANUFACTURING CO.
2345 West Nelson Street, Chicago 18, Illinois

© 1956 STERLING HARDWARE MFG. CO., CHICAGO.







Standard Stock

in standard colors

for QUICK DELIVERY!

Elementary School sizes . . . with concealed hinges

Now . . . Nicholson Toilet Compartments are stocked in standard styles and colors for quick delivery "from stock."

Modern production facilities, housed in a new 67,000 square-foot plant, are busy building up a standard-size stock of these three most popular styles. From ultra-modern to rugged utility designs, you can get the toilet compartments you need in a hurry.

You can specify better-built compartments . . . Nicholson compartments . . . and have them shipped *right away!* No waiting. No delay in completion of important contracts.

Specify Nicholson, for serviceability and service.

Nicholson Toilet Compartments are immediately available in the following types . . . in standard colors:

Type A—floor braced Type AR—overhead braced
Type B—flush style

Specify right from this new Nicholson "tell-all" bulletin!

Contains complete specifications, illustrations and engineering drawings . . . facilities, styles, construction, layouts and hardware. Send for a copy today!

NICHOLSON

W. H. NICHOLSON and Company

METAL PARTITIONS • TRAPS • VALVES • FLOATS

14 OREGON STREET, WILKES-BARRE, PA. • SALES AND ENGINEERING OFFICES IN 90 PRINCIPAL CITIES

JOHNSON *Individual Room* CONTROL
Makes *Every* Room Weather-Perfect!

If you are planning a new hospital or modernizing an existing building, be sure to consider the *extra* advantages of Johnson *Individual Room* Temperature Control.

Most important of these advantages is the assurance of providing the *correct* temperatures to satisfy *each* of the many varied needs of the modern hospital—needs ranging from protective temperatures in operating rooms, nurseries and research laboratories to healthful, prescribed temperatures in patients' rooms, and comfortable, refreshing temperatures in offices and public areas.

With Johnson *Individual Room* Control, the heating, cooling, ventilating or air conditioning systems are under completely automatic, precision control at all times. *Ideal temperatures prevail in every room in the building!* Humidity in critical areas is accurately and safely controlled.

Likewise important are the exceptional economy features of Johnson *Individual Room* Control. Because *every* Johnson System is engineered to meet the specific needs of the individual building and its particular mechanical equipment, you can provide these important benefits at the lowest possible operating cost. You eliminate heating and cooling waste and assure the maximum return on every operating dollar.

Among the rapidly growing number of progressive hospitals that are now getting the extra advantages of Johnson *Individual Room* Control is Our Lady of Fatima Hospital*. Here, some 275 Johnson *Individual Room* Thermostats provide efficient, waste-free direction of the heating, ventilating and air conditioning systems to insure optimum temperatures for every purpose. Operating suites have the additional protection of Johnson Humidity Control.

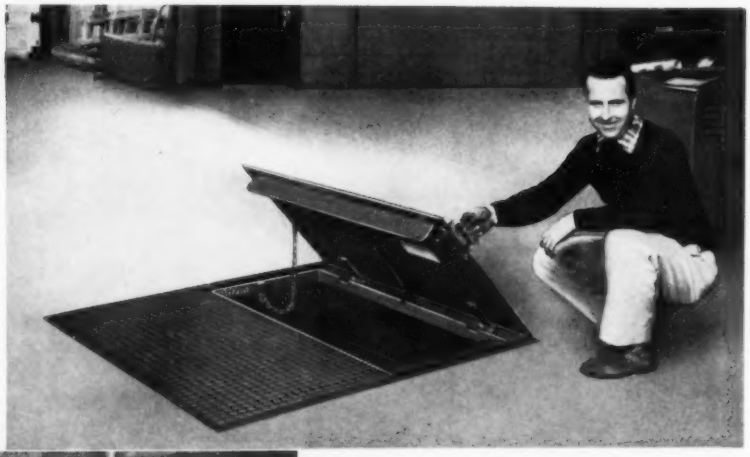
The extra advantages of Johnson *Individual Room* Control apply to all types and sizes of buildings. Next time you have a temperature or humidity control problem of any kind, ask an engineer from a nearby Johnson branch for his recommendations. No obligation, of course. Johnson Service Company, Milwaukee 1, Wisconsin. Direct Branch Offices in Principal Cities.

*Our Lady of Fatima Hospital, North Providence, R. I. John F. Hogan, A. I. A., architect, Providence; F. Dupuis Co., mechanical contractor, Pawtucket, R. I.

JOHNSON CONTROL
SINCE 1885

PLANNING • MANUFACTURING • INSTALLING

INSIDE



OUTSIDE

THE BILCO DOOR DOES THE JOB BETTER

All BILCO Doors are designed to serve your clients better whether installed inside or outside the building. Formed channel frame construction prevents dirt from accumulating under door leaves, eliminating the danger of warpage and costly repairs to broken hinges. Frame also insures absolute watertightness for exterior installations.

For floors, sidewalks, pits — any place there's a door under-foot — specify BILCO for long, trouble-free service, plus the safety and convenience of built-in springs for effortless operation.

The New Type T Floor Door . . . another BILCO first — to fill the need for a rugged, easy operating door to match the surrounding composition floor covering.

SEE OUR CATALOG IN SWEETS
OR WRITE FOR CATALOG A.I.A. FILE 12P

THE BILCO COMPANY
DEPT. 164A NEW HAVEN, CONN.

only the best is stamped

Bilco®

oldest and largest manufacturers of doors for special services

Gold Bond "Firefighter" Roof Deck helped make these costs possible!

STONEHAM, MASSACHUSETTS
ELEMENTARY SCHOOL

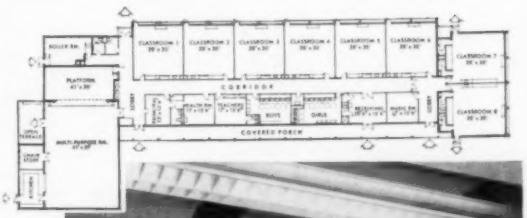
8 Classrooms . . . . . 1 All Purpose
1 Kitchen . . . 1 Administration
Contract cost $254,000
(including sitework)
Cost per sq. ft. $13.85
Cost per pupil $1,060
(30 per classroom)
Cost per classroom $21,800

THE COLONIAL PARK SCHOOL, Stoneham, Massachusetts. *Architect:* Perry, Shaw, Hepburn and Dean, Boston, Mass.; *General Contractor:* G. L. Rugo and Sons, Inc., Boston; *Roof Deck Contractor:* Martin Fireproofing Corporation, Boston.

The Colonial Park School cost figures above are almost revolutionary! A total contract cost of only $254,000...a cost per pupil of $1,060.

One reason construction costs stayed low for the Colonial Park School was the use of Gold Bond "Firefighter" Roof Deck and Gold Bond Econacoustic Form Board. With these two materials, a combination exterior roof and interior ceiling was built that sound conditioned, insulated and reflected light throughout the school. The Gold Bond "Firefighter" Gypsum Roof Deck becomes an integral part of the building's construction, together with 18,306 square feet of Econacoustic Form Board. "Firefighter" Roof Deck greatly reduces fire spread... a vitally important advantage in school construction. Incombustible gypsum can't transmit high temperatures or warp when exposed to hot flame.

Decks go up fast, too... *up to 30,000 sq. ft. can be poured in a single day!* Low dead load permits lighter supporting structures and allows sizeable savings in construction costs. Adaptable to pitched, barreled or flat roof designs. Send in the coupon below for complete details on safe, economical "Firefighter" Roof Decks.



NATIONAL GYPSUM COMPANY • BUFFALO 2, NEW YORK

Gold Bond®
BUILDING PRODUCTS

FIREFIGHTER GYPSUM ROOF DECK

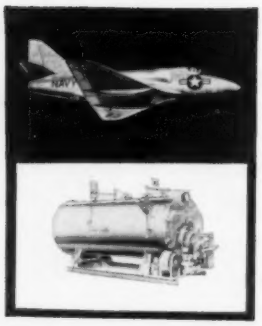
NATIONAL GYPSUM COMPANY, Dept. AR-56
Buffalo 2, New York

Gentlemen: Send me Technical Bulletin No. 589 with complete details on "Firefighter" Roof Decks.

Name _____

Address _____

City _____ *County* *Zone* *State*

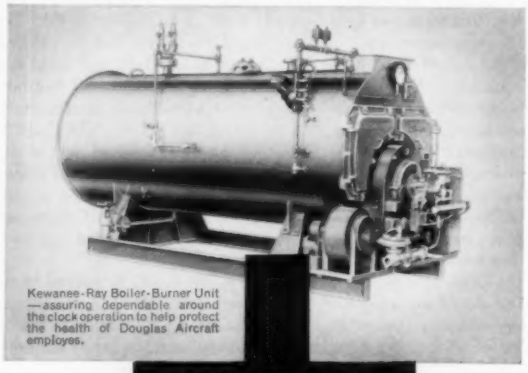


Sisters under the skin . . . when it comes to "cruising speed"

Douglas Aircraft Company, Inc. Division, El Segundo, California
Architect & Engineer: Holmes & Narver, Inc., Los Angeles, Calif.
Heating Contractor: E. Willardson, Inc., Los Angeles, Calif.

■ No one knows the importance of "cruising speed" operation in aircraft better than the Douglas Aircraft people. They know an airplane, to be efficient, to operate economically, to have longer life, must fly at "cruising speed." They know, too, there must be extra reserve power for take-off—for emergencies. So, when it came to boiler selection for the new A4D Skyhawk production facilities at their El Segundo, California Division, it was only natural they turned to Kewanee Reserve Plus Rated Boilers with 50% extra built-in power assuring "cruising speed" operation. For "cruising speed" means less strain—less wear. It means higher efficiency . . . it means lower maintenance and repair costs. Kewanee Boilers are rated on nominal capacity with reserve to take care of normal needs—meet emergencies of the present—fluctuating loads and future expansion. A boiler rated on maximum capacity, operating at constant top speed, requires more maintenance, constant attendance, and finer burner adjustment to maintain efficiency. So, choose Kewanee—for lower fuel and maintenance costs—more efficient "cruising speed" operation.

KEWANEE BOILER DIVISION of AMERICAN-Standard
101 Franklin Street, Kewanee, Illinois

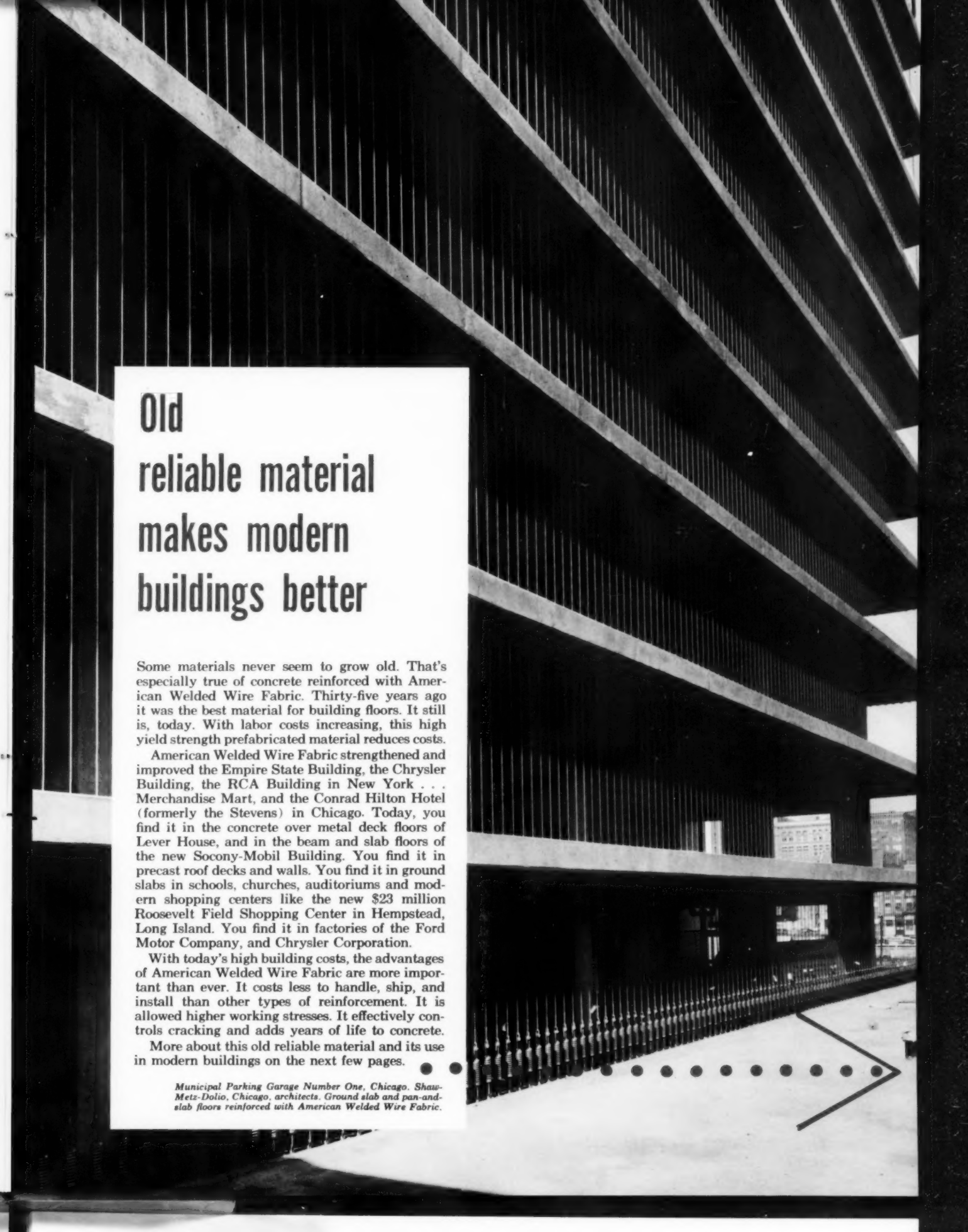


Kewanee-Ray Boiler-Burner Unit —assuring dependable around the clock operation to help protect the health of Douglas Aircraft employes.

KEWANEE
reserve plus rated

KEWANEE BOILERS

You can depend on Kewanee engineering



Old reliable material makes modern buildings better

Some materials never seem to grow old. That's especially true of concrete reinforced with American Welded Wire Fabric. Thirty-five years ago it was the best material for building floors. It still is, today. With labor costs increasing, this high yield strength prefabricated material reduces costs.

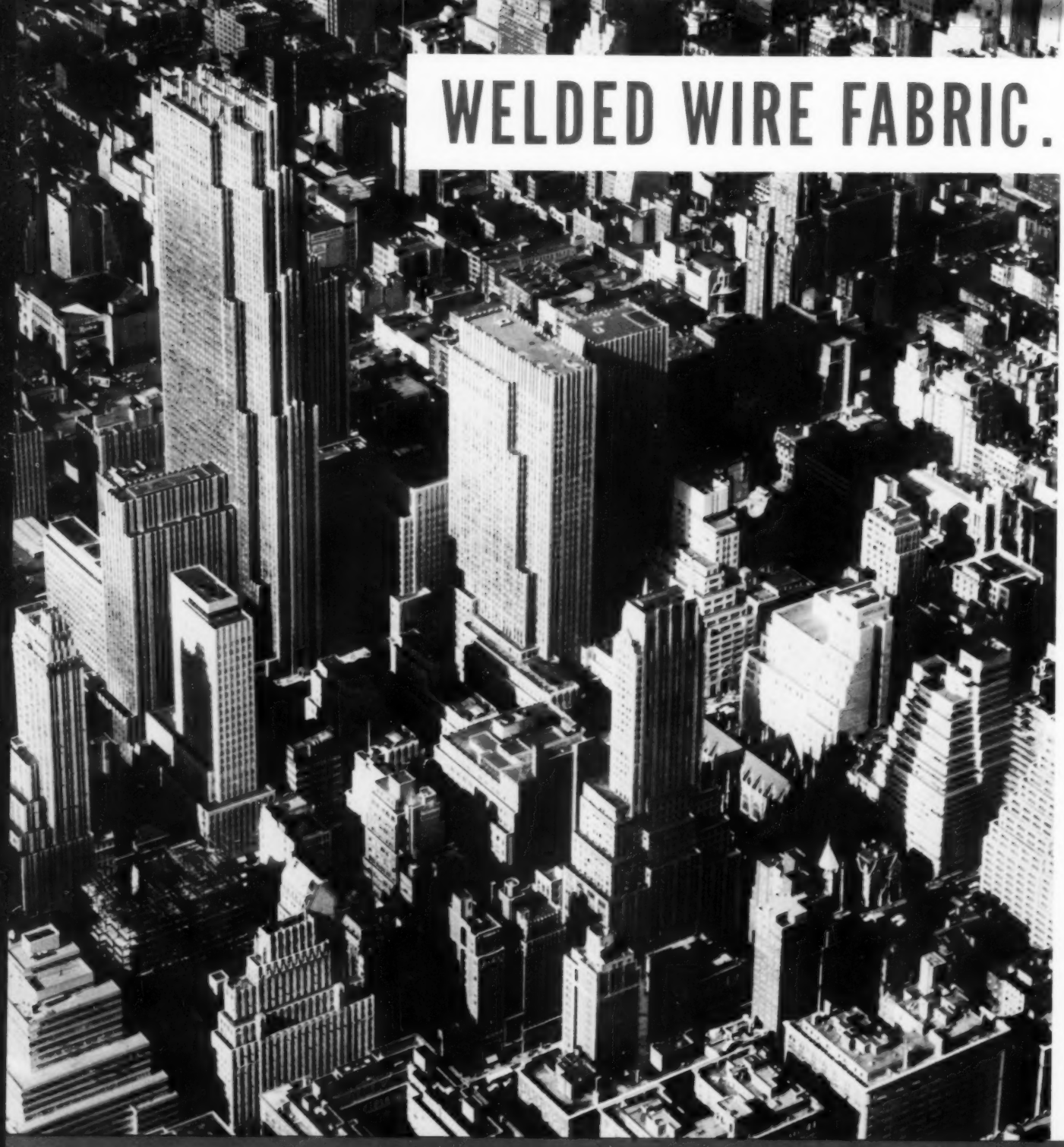
American Welded Wire Fabric strengthened and improved the Empire State Building, the Chrysler Building, the RCA Building in New York . . . Merchandise Mart, and the Conrad Hilton Hotel (formerly the Stevens) in Chicago. Today, you find it in the concrete over metal deck floors of Lever House, and in the beam and slab floors of the new Socony-Mobil Building. You find it in precast roof decks and walls. You find it in ground slabs in schools, churches, auditoriums and modern shopping centers like the new $23 million Roosevelt Field Shopping Center in Hempstead, Long Island. You find it in factories of the Ford Motor Company, and Chrysler Corporation.

With today's high building costs, the advantages of American Welded Wire Fabric are more important than ever. It costs less to handle, ship, and install than other types of reinforcement. It is allowed higher working stresses. It effectively controls cracking and adds years of life to concrete.

More about this old reliable material and its use in modern buildings on the next few pages.

Municipal Parking Garage Number One, Chicago. Shaw-Metz-Dolio, Chicago, architects. Ground slab and pan-and-slab floors reinforced with American Welded Wire Fabric.

WELDED WIRE FABRIC..



Big, Old New York is a showplace for American Welded Wire Fabric Reinforcement. Fourteen buildings in Rockefeller Center were strengthened and made durable with it. It is still the best floor reinforcement for new buildings, like the Socony-Mobil Building.

Behind The Glass of Lever House, American Welded Wire Fabric Reinforcement was used throughout.

the best floor reinforcement 35 years ago . . . and today

To Reinforce A Renaissance, the designers of Pittsburgh's Gateway Buildings used short-span concrete floors reinforced with American Welded Wire Fabric. American Fabric comes in long, wide rolls and, because it is prefabricated, can easily and quickly be unrolled into place.

YOU NEED 28% *less* reinforcing steel, compared to other types of reinforcement, when you specify American Welded Wire Fabric. That's because American Fabric is made from *high strength* cold drawn wire that is allowed a working stress of 30,000 psi., compared to only 20,000 psi. for other types.

American Welded Wire Fabric meets ASTM Specification A185-53T, and is now available in wire sizes up to and including ½" in diameter, at 2", 3", 4", and 6" on centers.

Send the coupon for complete technical design data on American Welded Wire Fabric.

Every type of reinforced concrete construction needs

USS American Welded Wire Fabric

USS

SEND FOR COMPLETE TECHNICAL DATA

American Steel & Wire
Dept. 56-B, Rockefeller Bldg.
Cleveland 13, Ohio

Please send complete information on the following:

- ☐ *American Welded Wire Fabric Reinforcement*
- ☐ *American Wire and Strand for Prestressed Concrete*

Name .....

Firm .....

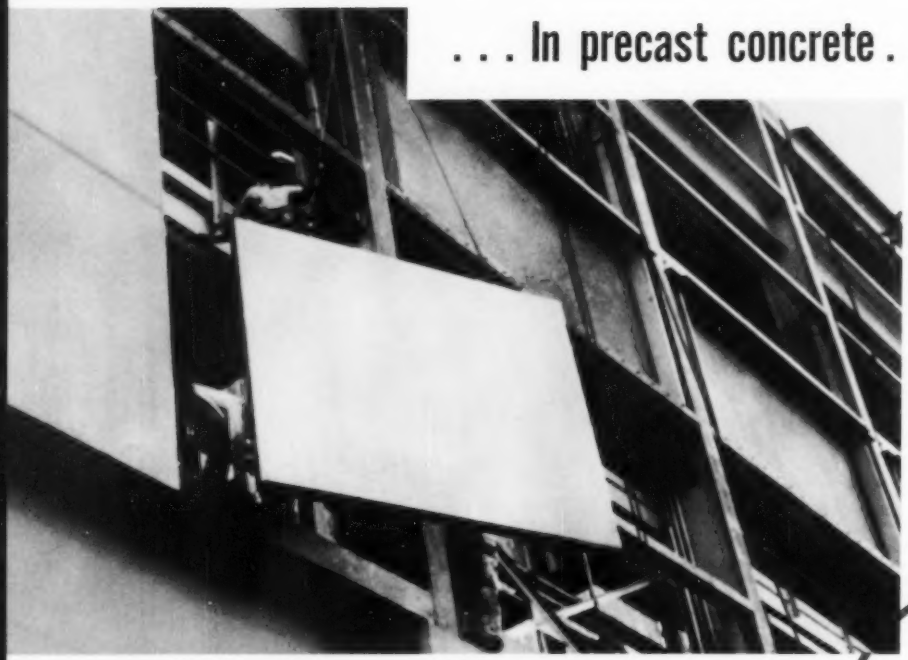
Address .....

City ..... **State** .....

With American Welded Wire Fabric

. . . In slabs . . . 30% MORE STRENGTH COSTS LESS THAN 10%

In concrete slabs built on the ground, American Welded Wire Fabric increases the strength of the slab 30%. Yet, it costs less than 10% of the cost of non-reinforced concrete. For this small investment, it retards cracking, keeps concrete smooth and attractive years longer. Use American Fabric for slabs in homes, shopping centers, factories, warehouses.



. . . In precast concrete . . . YOU GAIN SPEED AND STRENGTH

Architect H. G. Allen, in association with Scott & Eesley, Marietta, Ohio, made good use of precast concrete panels in this building at the Ohio State Fair Grounds. The precast panels, manufactured and erected by The Marietta Concrete Corporation, incorporate insulation and window openings right in the panels. They made it possible to close this 74,000-sq. ft. building at a rate of about 2,500 sq. ft. a day. Wire Fabric Reinforcement makes precast concrete *possible*, gives it strength and resistance to cracking.

CLIENTS WILL ASK "is it Reinforced"

AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL, GENERAL OFFICES: CLEVELAND, OHIO
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA., SOUTHERN DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Every type of reinforced concrete construction needs

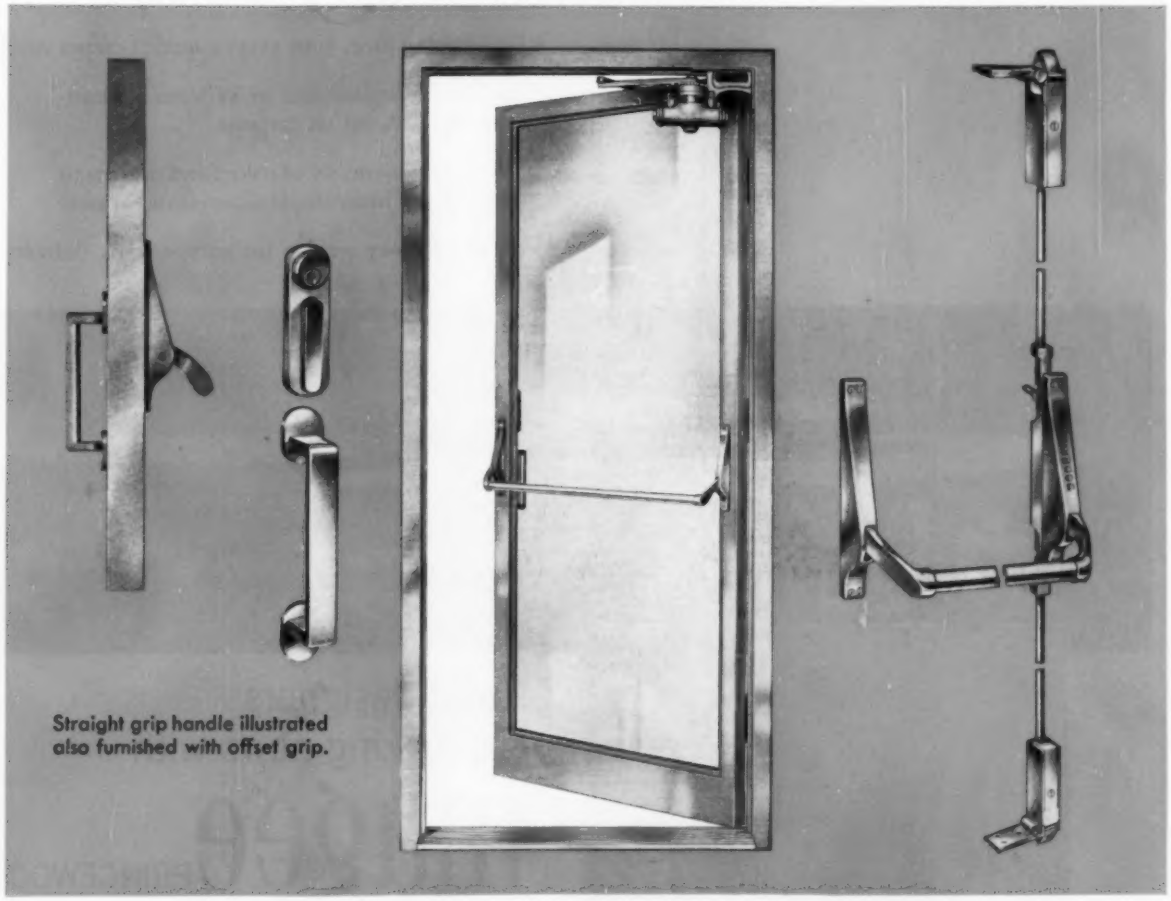
USS American Welded Wire Fabric

UNITED STATES STEEL

outstanding achievement in functional design...

LOCKWOOD'S new
CONCEALED PANIC DEVICE

for narrow stile, hollow metal doors



Straight grip handle illustrated also furnished with offset grip.

LOCKWOOD'S continuing product development program now makes available a concealed panic exit device that meets your most rigid requirements in every respect. The device is compact and sleek in its external appearance . . . simple, rugged and efficient in its internal operating mechanism.

- **applicable to both single and double doors**
- **installation is simple and extremely fast**
- **simplified, rugged operating mechanism assures minimum maintenance**
- **bolt features provide maximum security:**
  - **Both latch bolts are swinging bolts, each operating independently of the other**
  - **Automatically deadlocking top latch bolt**
- **minimum inside dimension of stile 1½" thick; 1⅛" wide**

Lockwood

The mark of superior performance

LOCKWOOD HARDWARE MANUFACTURING COMPANY
Fitchburg, Massachusetts

The BIG news
in floor coverings
is the complete contract
carpet program by

magee

- Designed to meet your every contract carpet need!
- Includes complete line of Wiltons, Axminsters, Velvets, tufted carpets!
- Tremendous variety of colors and designs to permit truly individual custom installations!
- Special factory service for sure, speedy delivery!

...and designers
are making news with

magee PRINCEWOOD

Fine all-wool Wilton, 6642/14, shown here in multi-colored abstract modern fish motif on aqua ground. 27 inch width. Used in the Marineland Restaurant and Cocktail Lounge in Los Angeles, California. Interior design by Webb Coleman.

magee

carpets and rugs

"The Mill of 3000 Dinner Pails." The Magee Carpet Company. Mills: Bloomsburg, Pennsylvania. Sales Offices: New York, Chicago, Boston and San Francisco.

When you turn this page,
you will read a message
which ranks in significance
with any we have published in
our 50-year history.

Herman Nelson Division
American Air Filter Company, Incorporated.

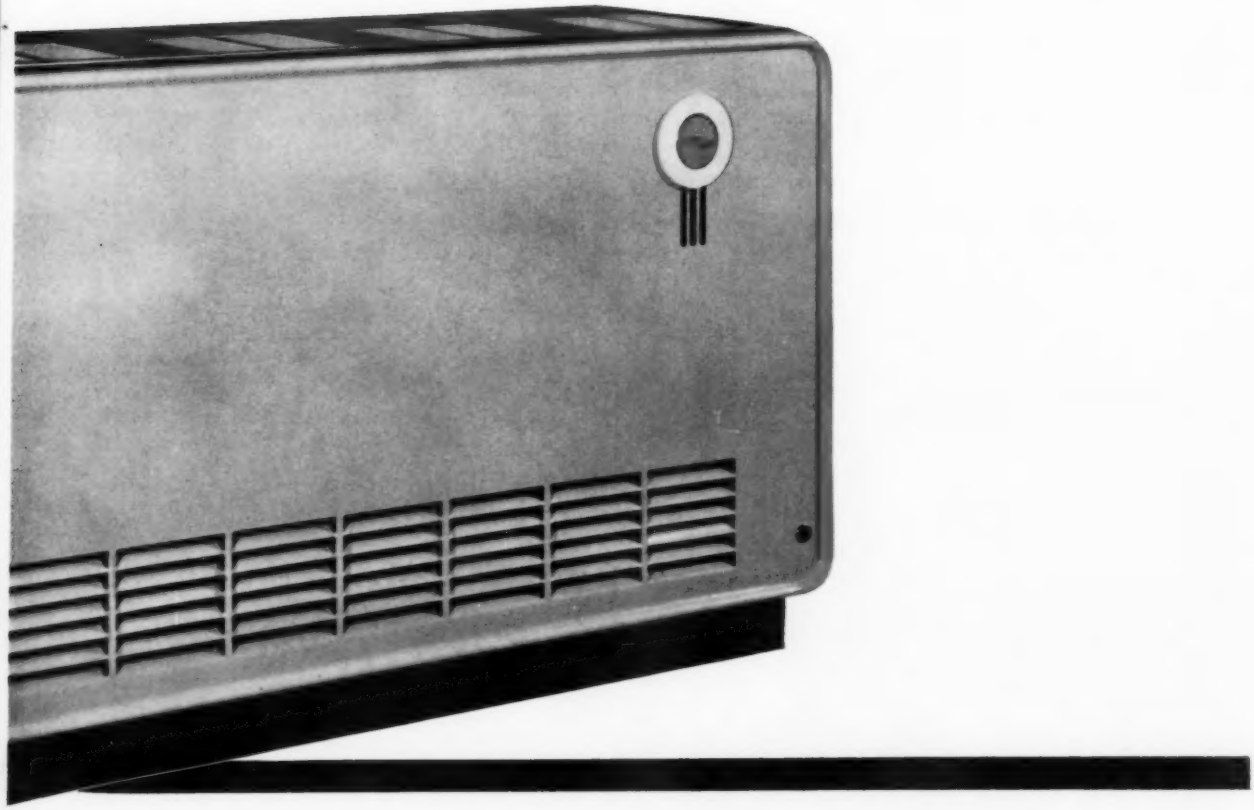
Herman Nelson Announces Designed, Built, Priced

NOW—after years of research, developing and testing—*it's here!* The Herman Nelson HerNel-Cool Air Conditioner, long-sought solution to year round classroom comfort, is the *only unit* especially designed to meet exacting classroom needs.

10 Years in Development. Herman Nelson engineers saw the "handwriting on the chalkboard". As far back as 1945, they were already at work on the problem of developing a unit that would combine complete summertime air conditioning with the long accepted heating-ventilating-natural cooling advantages of the unit ventilator. The ultimate goal was to produce a year round air conditioning unit, sensitive and versatile, automatic and . . . *economical.*

Fully Tested . . . *In Classrooms.* There were countless design changes, innumerable modifications. Finally, the working models—with factory installed packaged controls, electronic or pneumatic—were ready. These were put to work proving themselves on the job. First installations were made in classrooms throughout the South, where air conditioning needs could put them to the stiffest tests. Here—during the

First AIR CONDITIONING UNIT Specifically for Schools



winter months—they function as natural cooling-heating-ventilating units. When temperature zooms, they switch automatically to mechanical air conditioning. Conditions were rigorous, but the HerNel-Cool Air Conditioner exceeded every requirement!

It's Ready For You . . . NOW. Recognizing the growing need and demand for year-round air conditioning at the college, university and high school level, the Herman Nelson HerNel-Cool Air Conditioner is now ready to meet this requirement. Years of proof-in-use is always a sound buying gauge. And the HerNel-Cool Air Conditioner *has it*. For your FREE copy of our new 20-page book "HerNel-Cool AIR CONDITIONER for Schools," write Herman Nelson Unit Ventilator Products, American Air Filter Company, Inc., Louisville 8, Kentucky

herman nelson

PRODUCTS

American Air Filter Company, Inc.

System of Classroom Cooling, Heating and Ventilating

There are many good reasons why the store chose this door. And the fact that it opens easily is only one. The Flour City balanced door will give years and years of trouble-free service. Traffic flow is more than doubled. The folding action lessens projection into vestibule or over sidewalk area. All Flour City balanced doors are equipped with hydraulic check and bumper, automatic hold-open, and easy access to two-speed adjustments. Furthermore, Flour City doors are precision made and have the most precise action and performance that the finest materials and craftsmanship will provide.

So, when you consider the great advantages of balanced doors, including the customer convenience, be sure you check the advantages of Flour City balanced doors. Made better to last longer . . . and open easier.

FC

See our catalog in Sweet's file on doors

16a
FL

The FLOUR CITY *Ornamental* IRON COMPANY

2637 27TH AVENUE SOUTH • MINNEAPOLIS, MINNESOTA

Garrett Eckbo

Robert Royston

Edward Williams

Garrett Eckbo, Robert Royston and Edward Williams form one of the busiest and best-known partnerships in the field of landscape architecture. Their firm has been honored by the American Institute of Architects, the Architectural League of New York and Progressive Architecture Magazine, for outstanding work on commercial, industrial, educational and residential commissions. Published works include "Landscape for Living" (1950) and the forthcoming "THE ART OF HOME LANDSCAPING."

Of Garden Redwood, Mr. Williams says, "It's an important item on any landscape architect's list. There's a CRA grade for every garden use."

* * * * *

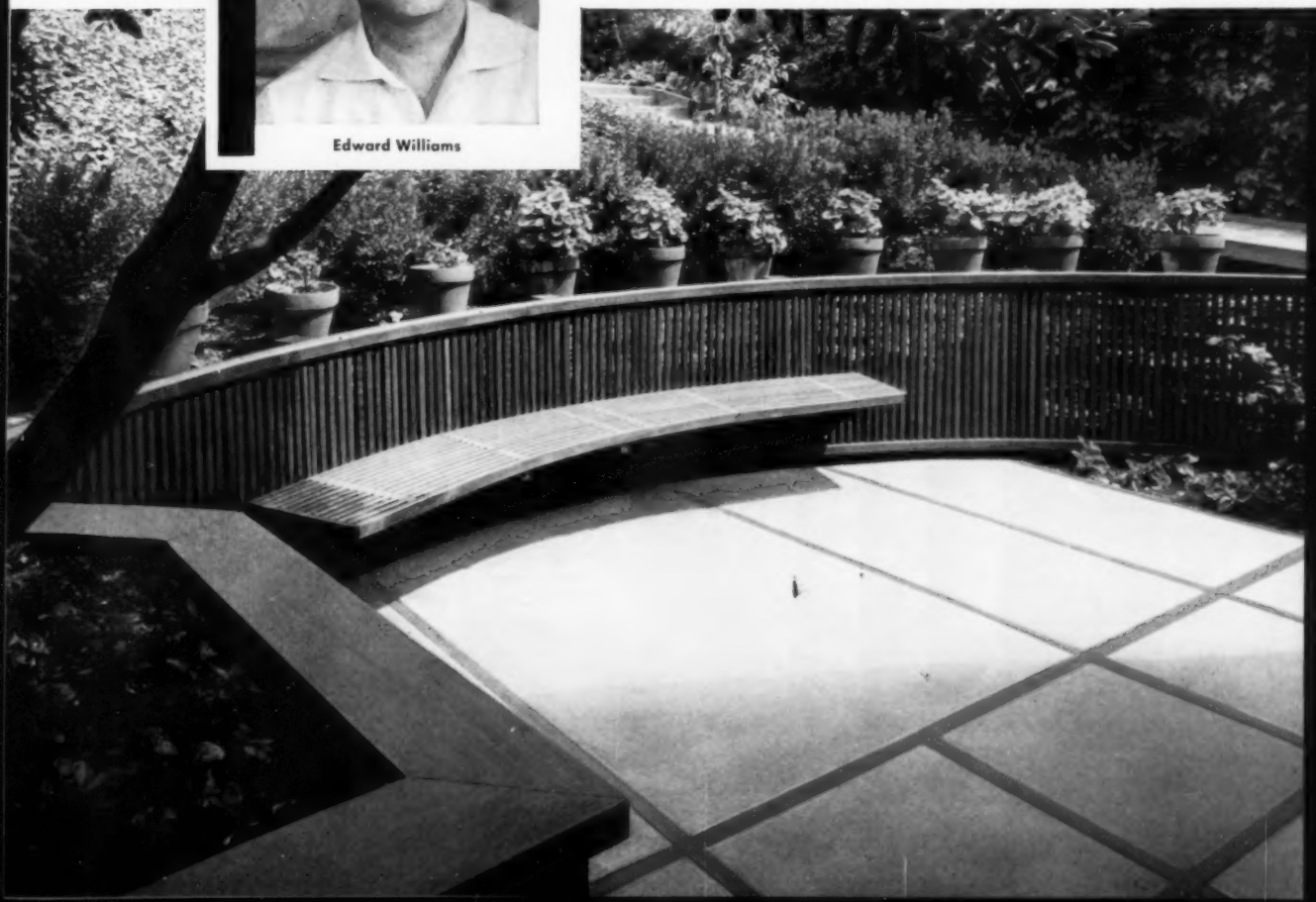
Coordinated landscaping adds immeasurably to the beauty and value of the home—to the satisfaction of the client—to the prestige of the architect.

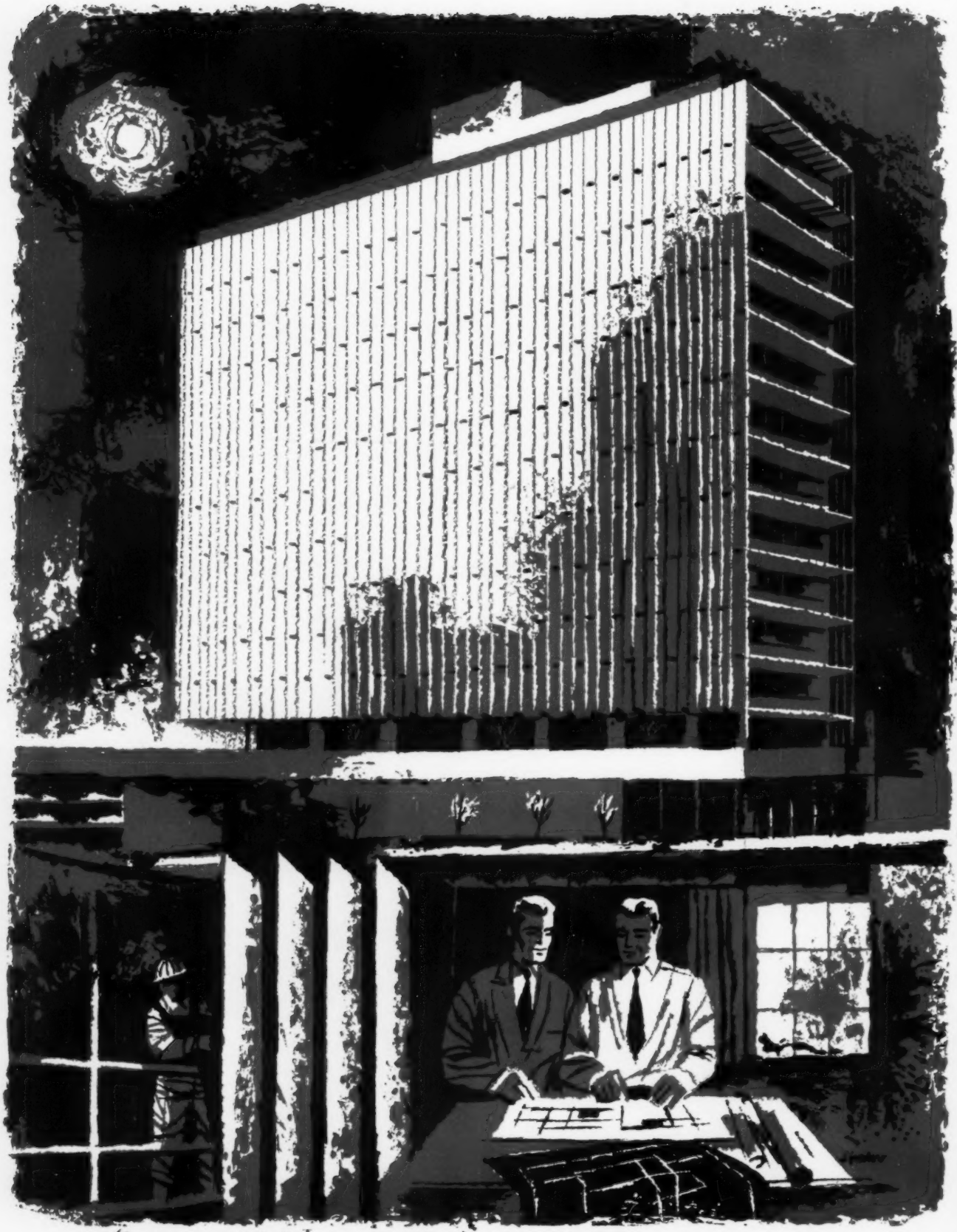
FOR LANDSCAPE ARCHITECTURE, TOO, IT'S

GRADE MARKED · TRADE MARKED

CALIFORNIA REDWOOD

CALIFORNIA REDWOOD ASSOCIATION, 576 SACRAMENTO STREET, SAN FRANCISCO 11, CALIFORNIA





The 3325 Wilshire Building

What architects conceived . . . Kawneer Company achieve

with versatile Alcoa® Aluminum

3325 WILSHIRE BUILDING

unique Los Angeles office structure

The architects conceived a more livable building. Alcoa Aluminum made it so . . .

By keeping it cool. By shading out bright sunlight. By allowing more natural daylight to enter.

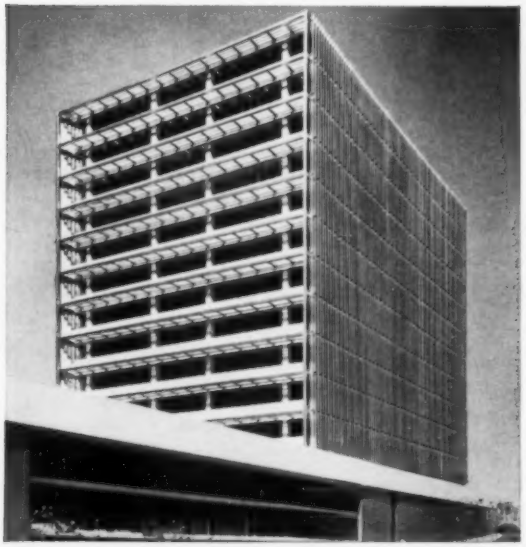
This interesting, imaginative, yet practical application of aluminum is dramatically expressed by a system of louvers on all four elevations to provide year-round shading against the searching California sun. More important to the owners is the fact that an estimated 80 tons has been cut from the building's air-conditioning load.

This louver system as well as the numerous other aluminum installations in the building was fabricated by the Kawneer Company, West Coast Division.

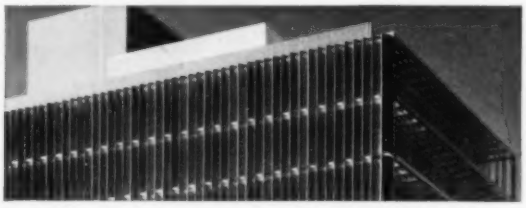
Walls are largely of glass and are supported on an aluminum framework. Windows and frames were installed by the Kawneer Company.

Other savings and innovations: No load-bearing wall foundations. Welded steel frame weighs three to four pounds less per building square foot . . . a big saving in steel and a bigger one in erection time and cost over ordinary structures.

To learn more about versatile aluminum and how to use it in solving building problems, contact your nearby Alcoa sales office. Or write Aluminum Company of America, 1888-E Alcoa Building, Pittsburgh 19, Pa.



OWNER—Tishman Realty & Construction Co., Inc., New York, New York
ARCHITECT—Victor Gruen & Associates, Los Angeles, Calif.
GENERAL CONTRACTOR—C. L. Peck, Los Angeles, Calif.
ALUMINUM CONTRACTOR—Kawneer Company, Berkeley, Calif., Niles, Michigan



Fixed vertical louvers of Alcoa Aluminum on east-west elevations, horizontal on north-south. Cantilevered three feet away from building to block sunrays.

THE ALCOA HOUR—Television's Finest Live Drama
Alternate Sunday Evenings

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA
©ALCOA

Your Guide to the Best in Aluminum Value

AEROFIN

Heat-Transfer Surface

Aerofin is sold only by manufacturers of nationally advertised fan system apparatus. List on request.

● High Efficiency

● Long Service Life

● Low Maintenance Costs

You are assured of high efficiency in heating or cooling — long service life — low maintenance and service costs, when you specify Aerofin extended-surface heat exchangers.

The reason is obvious: Aerofin makes heat exchangers *exclusively* — offers you the results of unequalled experience, unequalled production facilities, unequalled materials testing and design research — and the guidance of a complete, highly skilled engineering staff, at the plant and in the field.

For the most practical solution to your heat-exchange problem, ASK THE AEROFIN MAN.

AEROFIN CORPORATION 101 Greenway Ave. SYRACUSE 3, N. Y.

"We licked a 50 year old moisture problem with FOAMGLAS roof and wall insulation"

relates Joseph D. Bradley, Production Manager, Rust Craft Greeting Cards

"Thanks to FOAMGLAS roof and wall insulation, we've licked a moisture problem that plagued us for over 50 years," relates Mr. Joseph D. Bradley, Production Manager of Rust Craft, Dedham, Mass. Producing over 300 million quality greeting cards a year demands close control of moisture content in paper stock. Lack of it could cause damaging paper losses, waste skilled man-hours and machinery time.

Rust Craft's modern plant was finished in June, 1955. Mr. Bradley says: "We designed the paper storage and the paper and film processing sections around FOAMGLAS because it's moisture-proof. In those areas we must maintain a precisely controlled temperature and humidity. These warm, moist conditions could ruin other insulations, but not FOAMGLAS. It has given us *dependable* insulating protection since installation, and we anticipate many more years of trouble-free performance.

"Since FOAMGLAS is strong and rigid, it required no structural reinforcement," states Mr. Bradley. "Because it's fireproof, we got added building protection."

You can get all these benefits and more when you insulate your buildings, piping or equipment with FOAMGLAS. See for yourself! Write us today for a free sample and directions for six simple tests to prove that it's the ideal insulation for *your* needs. Address PITTSBURGH CORNING CORPORATION, Dept. B-56, One Gateway Center, Pittsburgh 22, Pa. (In Canada: 57 Bloor Street West, Toronto, Ontario).

FOAMGLAS®

the cellular, stay-dry insulation

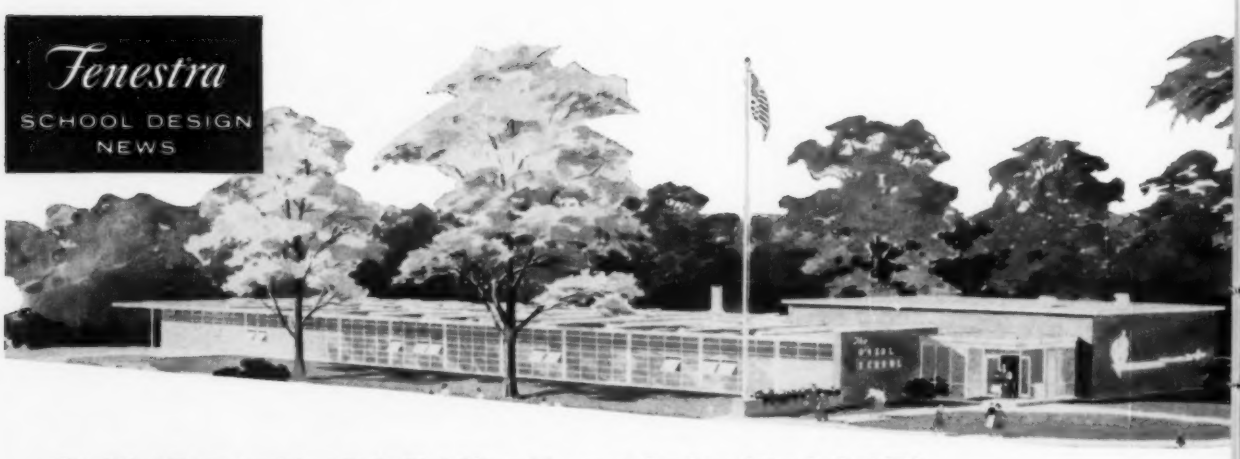
Pittsburgh Corning also manufactures PC Glass Blocks

Try this test! Prove to yourself that FOAMGLAS will stay dry for years of trouble-free, constant insulating efficiency in your plant.

Aerial view of the modern Rust Craft plant, insulated with FOAMGLAS.

Architects-Engineers: Graham, Anderson, Probst & White, Inc., Chicago, Ill.
General Contractor: Aberthaw Construction Co., Boston, Mass.
Roofing and Wall Panel Contractor: Atlantic Roofing Co., Boston, Mass.

Fenestra
SCHOOL DESIGN
NEWS



The O'Neal Elementary School, Poplar Bluff, Missouri, is a recent Glen Drew designed school. With an area of 15,872 square feet, it cost $9.62 per square foot including all equipment, ready for occupancy. It was built for $3,000 less than the original estimates, a typical result of a Drew design.
Contractor—George A. Gassman Construction Company, Poplar Bluff, Missouri.

The metal pan acoustical ceiling of Fenestra Building Panels is shown in this classroom at O'Neal School. Acoustical material is "built in" the cellular panels and the bottom steel plate is perforated to absorb sound. Another typical Drew detail is the skylight frame containing fluorescent tubes and diffusing element that convert it into an economical lighting fixture. Skylights are 24" wide, same as the panels, which eliminates on-the-job cutting.

Architect

Glen Drew, AIA,

Poplar Bluff, Missouri,

designs with

Fenestra Building Panels to

CUT SCHOOL COSTS FROM FOUNDATION TO ROOF!

This construction photo of O'Neal School shows how Architect Drew uses the fast erection of Fenestra Building Panels and curtain walls of Fenestra Galvanized-Bonderized Steel Windows to close in a school quickly. This allows other trades to work "indoors". Contractors on Drew jobs can eliminate "down time" for weather as a contingency.

Attractive, livable schools, designed for community needs, that can be built and maintained economically, are a problem in most school districts.

Architect Glen Drew, Poplar Bluff, Missouri, has shown Southeastern Missouri school boards how to get the most out of their construction dollars. As a result of economy features conceived on his drafting board, Drew has been commissioned to design 21 of Missouri's most recent schools. They have been built in the $6.50 to $10.00 per square foot cost range including construction, mechanical equipment and trim.

Drew's use of modular design and unique arrangements of standard building products makes the contractor's job a simple one of rapid assembly. Starting at the top, he uses Fenestra* Acoustical Building Panels for the roof. These 24" wide cellular steel panels span up to 30 feet and combine the structural roof deck with a metal pan acoustical ceiling in one lightweight, quickly erected building unit. The five different materials required to duplicate this construction could not be bought and erected for the cost of this prefabricated modular unit. *Only one trade is required for installation!*

Maintenance costs are reduced, too. The ceiling may be washed or repainted whenever necessary, without affecting acoustical efficiency. It will never sag, fall or stain as will many applied acoustical materials.

By using Fenestra Building Panels to span interior masonry bearing walls, scarce structural steel can be reduced to a minimum. Plain panels may be combined with the acoustical panels for overhangs and other areas.

If you are looking for the key to low-cost, high-quality school design and construction, be sure to get the facts on Fenestra Building Panels, today. Call your local Fenestra Representative or mail the coupon below.

*Trademark

Fenestra INCORPORATED | Metal Building Panels

Your Single Source of Supply for
DOORS • WINDOWS • BUILDING PANELS

Fenestra *Incorporated*
AR-2252 East Grand Boulevard
Detroit 11, Michigan

Please send me complete information on Fenestra Building Panels for Schools.

NAME_____

FIRM_____

ADDRESS_____

CITY_____ STATE_____

Fenestra saves you up to $100 per door with this

NEW CUSTOM DESIGNED

Here's a door designed especially for school classrooms. It looks expensive, but it isn't. It's a stock door by Fenestra—with an installed cost about $100 less per opening than you'd expect to pay.

What's special about this door? First, the hardware. The new anodized aluminum pull-push plate makes it easy to open for even the smallest child. It's locked from the outside with a key. A special thumb turn on the inside will open the door if a child should be locked in by mistake. An automatic door closer and inside kick plate are also included. Now, look at the glazing. Two panes of patterned glass with one pane of clear glass gives classroom privacy with a view window at eye level.

Architect Glen Drew, Poplar Bluff, Missouri, uses Fenestra Hollow Metal Door-Frame-Hardware Units for custom quality at stock door costs. O'Neal School, Poplar Bluff, Missouri, has 42 Fenestra Flush Doors. *Contractor:* George A. Gassman Construction Co., Poplar Bluff, Missouri.

SCHOOLROOM DOOR

The door itself is a Fenestra Hollow Metal Flush Door that can't warp, swell, stick or splinter. It always swings open smoothly and closes quietly. Thousands of these doors are in use in schools all over the country.

This classroom door costs you less to buy and install because Fenestra mass produces them on special jigs that save expensive labor. Then the doors, complete with frames and hardware, are delivered to your school ready to install. You don't have to cut, fit, mortise, drill or tap a Fenestra Door. It's factory machined for all hardware, either template or surface mounted. *One man with a screw driver can install it in minutes!*

Before you choose the doors for your next school, call your local Fenestra Representative—listed in the Yellow Pages—for complete information on this New Fenestra Classroom Door, or mail the coupon below.

Fenestra® INCORPORATED

HOLLOW METAL DOOR-FRAME-HARDWARE UNITS

Your Single Source of Supply for
DOORS • WINDOWS • BUILDING PANELS

Fenestra Incorporated
AR-2252 East Grand Boulevard
Detroit 11, Michigan

NAME_____

FIRM_____

ADDRESS_____

CITY_____ STATE_____

La Cienega Homes IN SAN FERNANDO VALLEY

are all AllianceWare equipped

Typical La Cienega Home
Designed and built by BRS Development Co. • *Plumbing Contractor*—The Gluck Co. • *AllianceWare furnished by* Tri-State Pipe and Supply Co.

Bathtubs

Lavatories

Closets

Sinks

AllianceWare
PORCELAIN ON STEEL

Gil Brown of BRS Development Company has installed AllianceWare in many developments, so it was natural that AllianceWare should be specified for the company's newest community—La Cienega Homes.

Situated on part of the famous La Cienega Ranch—the oldest ranch in San Fernando Valley—the La Cienega project comprises 700 three- and four-bedroom, two-bath houses in the $13,000 to $16,650 class.

AllianceWare fixtures—tubs, water closets, lavatories and sink and tray combinations—are used throughout.

Builders who know and use AllianceWare, select this famous sanitary ware again and again, because they have learned there is only one quality to AllianceWare—the finest we know how to produce.

AllianceWare—porcelain-on-steel—is designed to meet modern building needs. Lighter in weight for easier handling and installation. Porcelain-on-steel to assure lustrous, stain-proof beauty. Formed steel to provide exactness in dimensions and to avoid useless dead weight. Furnished in 5 colors—as well as white—to meet modern interior decorative schemes.

If you do not have the complete AllianceWare catalog, we'll gladly mail a copy.

ALLIANCEWARE, INC. • Alliance, Ohio
Plants in Alliance, Ohio; Colton, California; Kilgore, Texas
Bathtubs • Lavatories • Closets • Sinks

Edway Building, Memphis, Tennessee. Architects: Hanker and Heyer, Memphis. Contractor: George E. Bass and Co., Jackson, Mississippi. Walls: Lupton Type-H Aluminum Curtain-Walls, with a 3'-7" modules. Insulated spandrels with ⅛" aluminum exterior facing, 16 ga. galvanized steel interior facing. Projected-type window ventilators opening out at bottom.

Buildings come alive with Lupton Curtain-Walls

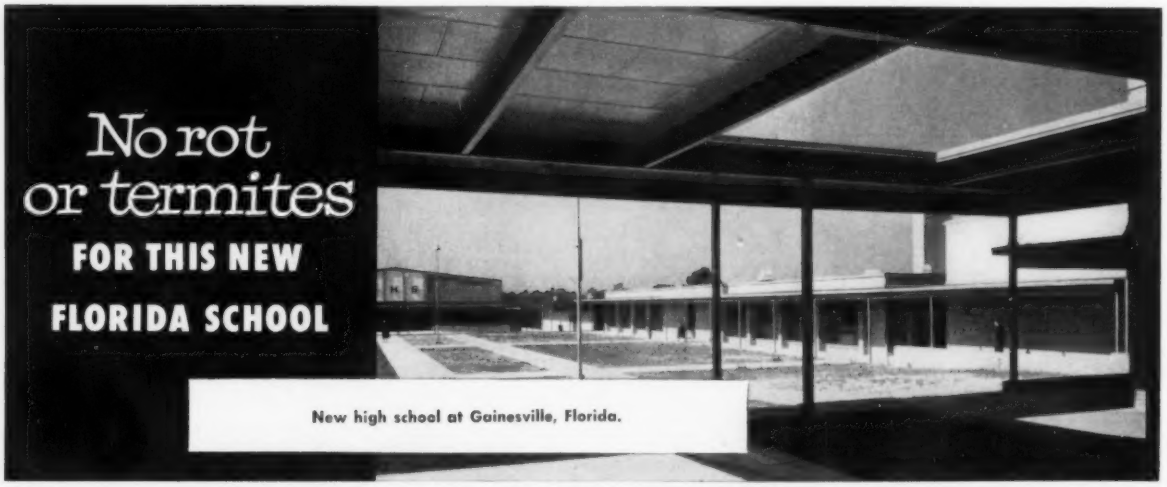
May we send you an illustrated catalog?

Michael Flynn Manufacturing Company — Main Office and Plant: 700 East Godfrey Avenue, Philadelphia 24, Penna. New York Office: 51 East 42nd Street, New York 17, N. Y. : : West Coast Office: 672 South Lafayette Park Place, Los Angeles 57, Cal. : : Stockton Office and Warehouse: 1441 Fremont Street, Stockton, Cal. : : Cincinnati Office: De Sales Building, 1620 Madison Road, Cincinnati 6, Ohio : : *Sales Offices and Representatives in Other Principal Cities*

LUPTON

METAL WINDOWS AND CURTAIN-WALLS

No rot or termites FOR THIS NEW FLORIDA SCHOOL



New high school at Gainesville, Florida.

Architects: Goin and Moore, Gainesville, Florida. General Contractor: Kenneth H. Smith, Daytona Beach, Florida. Lumber Sub-Contractor: J. K. Shirah, Daytona Beach, Florida.

In the gymnasium: Wolmanized lumber, which is rot and termite-resistant, was specified exclusively for the gymnasium sub-flooring, furring and joists.

In the auditorium: Carpenters at work on construction of auditorium, where all sub-flooring is Wolmanized lumber.

No matter where you live, it pays to use Wolmanized® lumber. Even in Florida's semi-tropical climate, where termites and decay have a field day, this special kind of lumber far outlasts ordinary wood.

That is why the architects specified Wolmanized lumber for this new high school at Gainesville, Florida. This *protected* lumber was used for all framing and concealed woodwork . . . for the sub-flooring in the gymnasium and auditorium . . . even for the framework around the blackboards.

Wolmanized lumber is protected against termites, decay and dry rot by pressure-treatment with a chemical preservative. It lasts many times longer than untreated wood and is, therefore, widely used in schools, homes, hospitals and factories.

Wolmanized lumber is specified by more architects than any other kind of treated lumber. It is sold through wood preservers and lumber dealers throughout the country. Write for free illustrated booklet that covers product advantages and applications. Koppers Company, Inc., Wolman Preservative Department, Pittsburgh 19, Pennsylvania.

SEND FOR FREE ILLUSTRATED BOOKLET!

KOPPERS

Wolmanized®
LUMBER

CLEAN • ODORLESS • NON-CORROSIVE • PAINTABLE

...and check efflorescence on brick and masonry walls with

Hydrocide* COLORLESS S•X

(SILICONE-BASE)

Hydrocide S•X penetrates into the surface to make the masonry itself water-repellent. It minimizes the effects of weathering and discourages the adhesion of dirt and grime, preserving the original beauty, color and texture of exterior brick and masonry.

Before you buy or specify any water-repellent, consider these facts:

- Because S•X was one of the first in its field, it has had the benefit of longer research and performance testing under all climatic conditions.
- S•X is *the* silicone-base water-repellent created out of *complete* collaboration between the primary silicone producers and Sonneborn's intimate masonry waterproofing knowledge.
- Sonneborn issued the first *performance* specifications ever drafted for a silicone-base water-repellent; this specification has served as the model for the industry.

Thus, Hydrocide S•X started with "plus" advantages—which continuous research has maintained over the years.

The use of Hydrocide S•X on many millions of sq. ft. of brick, concrete, block and stucco surfaces confirms its eminently satisfactory performance.

A Product of **Sonneborn** RESEARCH

For over 50 years manufacturers of quality building products.
Makers of LAPIDOLITH CONCRETE HARDENER
COLORCOAT • HYDROCIDE DAMPPROOFINGS

*T. M. Reg. U. S. Pat. Off.

L. SONNEBORN SONS, INC.
Building Products Division— Dept. AR5
404 Fourth Ave., New York 16, N. Y.

MAIL COUPON FOR MORE FACTS

Gentlemen:

We are interested in further information on Hydrocide Colorless S•X for treating masonry walls of buildings.

Architect ☐ Engineer ☐ Contractor ☐ Dealer ☐

Name_____

Company_____

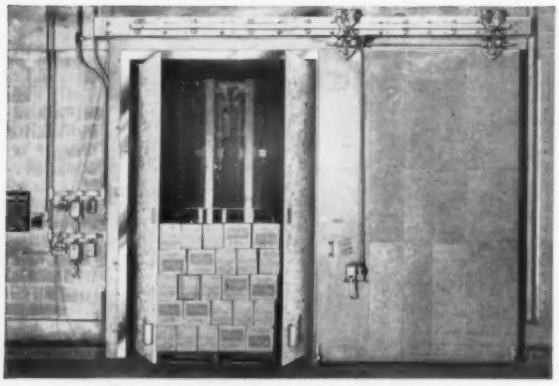
Location_____

City_____ Zone____ State_____

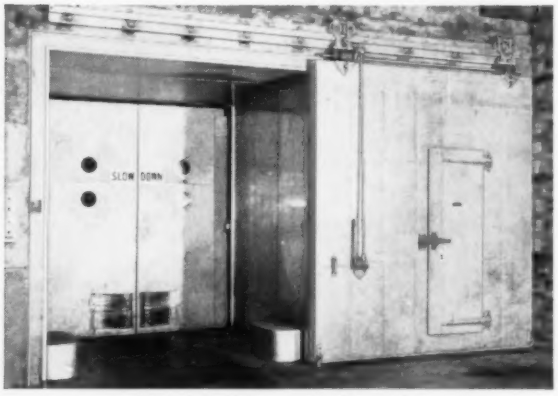
No wasted platform space

Jamison Horizontal Sliding Cold Storage Doors

- conserve floor space
- give tight seal
- permit power operation



Doors for large openings easily supported



Wicket door for personnel passage

Equipped for power operation with remote control

For help on any cold storage door problem, consult your architect or write to JAMISON COLD STORAGE DOOR CO., HAGERSTOWN, MD., U.S.A.

JAMISON
HAGERSTOWN, MARYLAND, U. S. A.

More JAMISON Doors are used by *more* people than any other Cold Storage Door in the world.

FRANK LLOYD WRIGHT'S PRICE TOWER EQUIPPED THROUGHOUT WITH SOLID OLSONITE SEATS

His First Skyscraper Alternates Offices and Apartments on 19 Floors

SELECTED FOR THE OFFICES, Solid Olsonite #10 White Shock-Proof Seats. Designed to last a lifetime of normal use, they are solid all the way through. Olsonite Seats will not crack, chip or peel.

SELECTED FOR THE APARTMENTS, Solid Olsonite #57 Crane Suntan Seats harmonize with the attractive bathroom design. Olsonite Seats keep their beauty—there is no exposed metal to rust or corrode.

#10 Olsonite Seats—available in black or white

#57 Olsonite Seats — available in more than 35 colors, plain or pearlescent

SOLID Olsonite SEATS

SWEDISH CRUCIBLE STEEL COMPANY
Plastics Division, 8561 Butler Ave., Detroit 11, Michigan
ORIGINATORS OF THE SOLID PLASTIC SEAT

The Price Tower, Bartlesville, Oklahoma . . . Architect: Frank Lloyd Wright
Owner: H. C. Price Co.
Mechanical Engineer: W. J. Collins, Jr.
Mechanical Contractor: W. A. Landers
Fixture Supplier: Crane Company

THE GREATEST ENGINEERING
ADVANCE IN POWER EXHAUSTERS
SINCE LOW CONTOUR DESIGN

NEW JENN-AIR

Quiet-tested

ROOF EXHAUSTER

WITH U-SPRING CUSHION
SUSPENSION MOUNTING

The new Quiet-Tested Roof Exhauster design carries out the same graceful low contour lines so popular in all Jenn-Air Aluminum Exhausters. U-Spring Cushion Suspension Mounting eliminates the transmission of vibration and motor hum to the base of the unit, thus achieving a quietness never before possible. Patents pending.

Jenn-Air Exhausters on production line moving up for testing. Every Unit is line-lab tested for vibration, sound, motor load and insulation breakdown before leaving the plant.

Here is the Vibronic Eye test chamber along the production line. Through the window is shown a Quiet-Tested Exhauster which has just moved into position for testing. This final check eliminates the element of human error.

Here's a new "hush-hush" product that *isn't* being guarded against discovery . . . in fact, Jenn-Air unwraps its exclusive Quiet-Tested Roof Exhauster for all to see . . . *NOW*. It is hailed as the most significant engineering advance in power exhausters since low contour design—a Jenn-Air First. Now, for the first time, a power exhauster is offered that's truly quiet.

U-Spring Cushion Suspension Mounting Cuts Vibration—Lowers Noise Level

A new principle of power assembly mounting is introduced in this new Jenn-Air Exhauster. U-springs suspend the power unit so it is cushioned against vibration . . . an exclusive Jenn-Air feature. New design in fan blade and housing reduces air velocity. In addition to the usual dynamic and static blade balance, a further critical test is made . . . the motor and blade are balanced together . . . another Jenn-Air exclusive. *All this adds up to the lowest noise level ever achieved in power exhausters.*

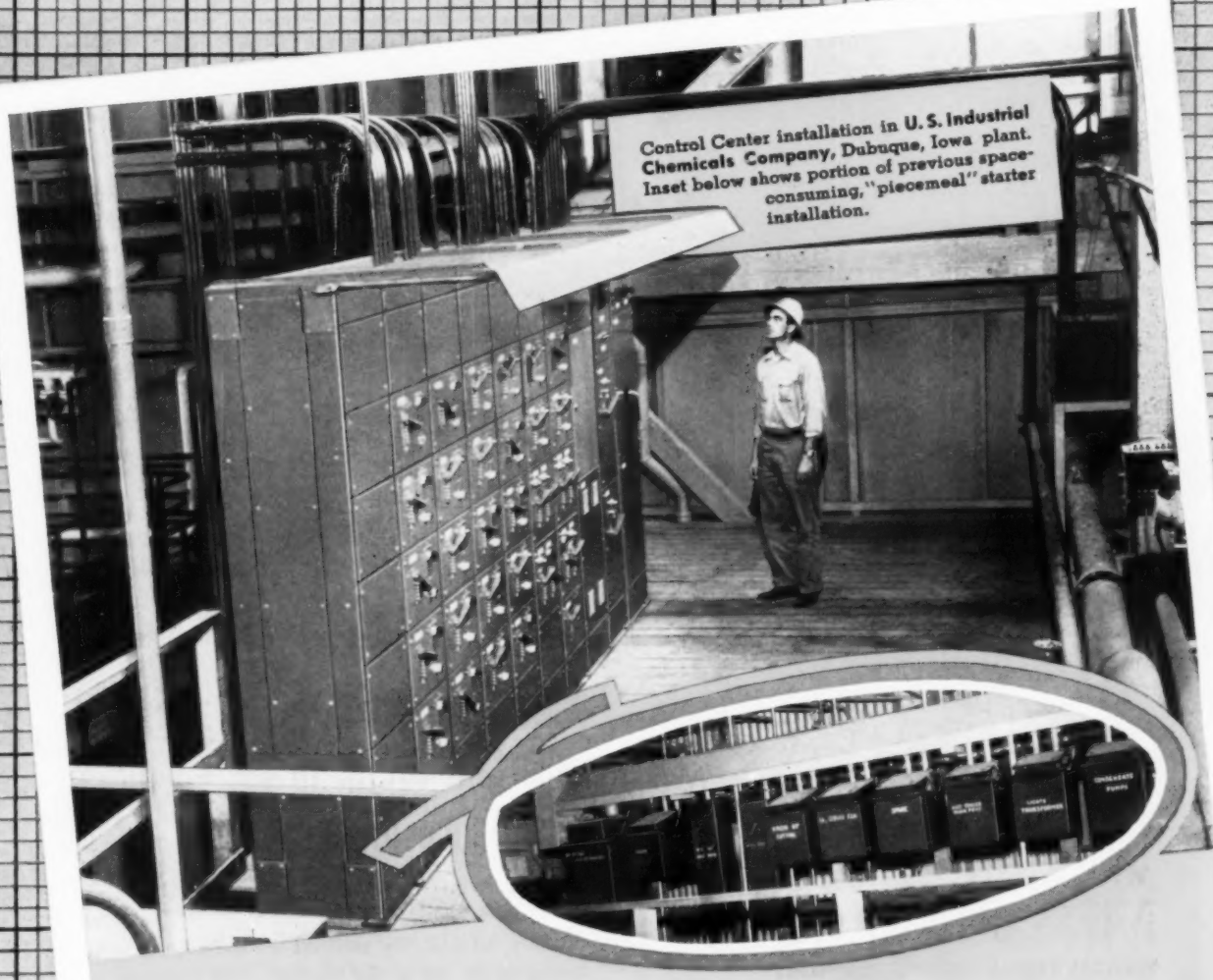
Every Quiet-Tested Exhauster Individually Checked by Exclusive VIBRONIC EYE

Every Quiet-Tested Unit is individually checked under simulated operating conditions by the exclusive Vibronic Eye in a sound control room. It works this way. First, a standard of acceptable quietness is established . . . then the Vibronic Eye tests every exhauster for vibration and noise. A further test is made for motor load and insulation break-down. Those are examples of the ceaseless search to improve products by Jenn-Air. So, look to Jenn-Air for better engineered exhausters—designed and line tested to perform beyond any in the field.

"Ratings in accordance with standard test code by the Texas Experiment Station"—determined in accordance with procedures as set forth by NAFM and ASH&VE.

JENN-AIR PRODUCTS INDIANAPOLIS BETTER VENTILATING Equipment

JENN-AIR PRODUCTS CO., INC.
1102 Stadium Drive
Indianapolis 7, Indiana



Control Center installation in U. S. Industrial Chemicals Company, Dubuque, Iowa plant. Inset below shows portion of previous space-consuming, "piecemeal" starter installation.

"COMPARISON convinced us that a SQUARE D Control Center offered us MORE!"

These design features make Square D your logical choice, too . . .

INCREASED SAFETY because bus bars are fully enclosed, rigidly supported and have ample cross section. Circuits are isolated by individually enclosed plug-in units. Disconnect handle designed for maximum operator protection.

FLEXIBILITY. Individual plug-in units or complete sections are easily added, removed or exchanged. Pushbuttons, pilot lights, and selector switches are readily added to unit doors.

INSTALLATION ECONOMY. All wiring channels are large and accessible from front without removing units. No "wire fishing."

SPACE ECONOMY, TOO. Up to six combination starters fit in a 20" x 20" x 90" section. Plug-in unit heights designed in space-saving increments of 3 inches.

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

Another
POPULAR
LANDMARK
goes modern—

NEW WORLD LIFE BLDG.
SEATTLE, WASH.

with montgomery
Measured-Demand
VERTICAL TRANSPORTATION EQUIPMENT

Another obsolete, inefficient attendant-operated rheostatic control elevator system gives way to Montgomery's modern, efficient and economical passenger-operated "Measured-Demand" system of vertical transportation. Features that highlight this most modern of elevator systems include Montgomery's Gearless Machines, Master Gearless Car and Hatch Door Operators, Door Hangers, complete Signals with Montgomery Glo-Buttons and Measured-Demand Regulators that provide a wide range of flexible traffic control programs.

Passengers are assured triple safety protection through Montgomery Switchmats, Photo-Electric Eyes and Sensitive Door Edges.

Investigate the many operating and service economies Montgomery "Measured-Demand" Passenger-Operated elevator systems have to offer.

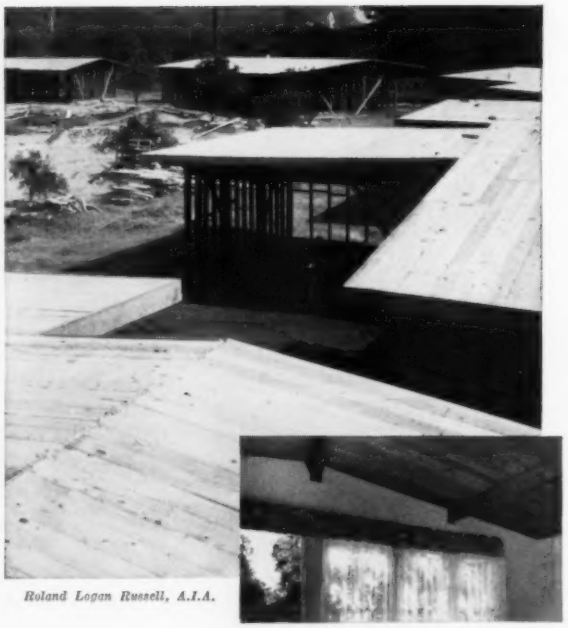
A FEW RECENT MODERNIZATION PROGRAMS THAT HAVE INCLUDED NEW MONTGOMERY MEASURED-DEMAND ELEVATOR SYSTEMS

Muehlebach Hotel, Muehlebach Towers, Kansas City, Mo.; U. S. Post Office, Salt Lake City, Utah; the Alladin Hotel, Kansas City, Mo.; Pere Marquette Hotel, Peoria, Ill.; and Badgerow Bldg., Sioux City, Iowa.

MONTGOMERY
Dependable ELEVATORS

montgomery elevator company
Moline, Illinois

Exclusive Manufacturers of Passenger and Freight Elevators Since 1892



Roland Logan Russell, A.I.A.

White Fir roof decking doubles as exposed ceiling.

"White Fir is an important factor in the public acceptance of our homes"

Ray K. Cherry, President, Hadley-Cherry, Inc., builders and developers of Foothill Park, Azusa-Covina, California

"Beauty, adaptability and cost are the important factors in the use of this material. Our projected schedule for the next few years contemplates continued designs using White Fir."

Put extra sales appeal into the homes you build with friendly Western Pine woods. Specify straight-grained, dimensionally stable White Fir for framing and roof decking—for natural-finish, exposed ceilings. You'll find it and the other woods from the Western Pine region at your local lumber dealer.

the Western Pines — IDAHO WHITE PINE, PONDEROSA PINE, SUGAR PINE

the Associated Woods FROM THE WESTERN PINE REGION — WHITE FIR, LARCH, DOUGLAS FIR, ENGELMANN SPRUCE, INCENSE CEDAR, RED CEDAR, LODGEPOLE PINE

for sales-minded facts and ideas, write for the free illustrated booklet, "WHITE FIR," to WESTERN PINE ASSOCIATION, Dept. 515-U, Yeon Bldg., Portland 4, Oregon.

"WHITE FIR" is a Registered Trademark of the Western Pine Association

TODAY'S WESTERN PINE TREE FARMING GUARANTEES LUMBER TOMORROW

THE LIGHTING SYSTEM THAT
goes together on the floor

...and saves 50% on Installation costs

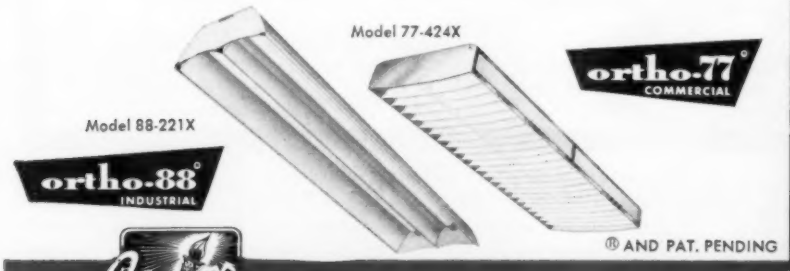
The new Gibson ORTHO Fixtures mount on a special channel called the UNI-RACE. In the photo above, the telescoping sections of the UNI-RACE are being assembled on the floor in a matter of minutes. The receptacles which come with each 4-foot section are connected as shown in the inset. The light but rigid UNI-RACE in 24′ to 48′ lengths is easily lifted and hung directly on joists, beams or stems. The fixtures simply snap into place on the UNI-RACE which holds them in perfect alignment.

An easier, faster and far better job! Is it any wonder that contractors report savings of more than 50% in labor and materials on Gibson ORTHO Installations?

Wouldn't you like more information about this totally new concept in industrial and commercial lighting design? Drop us a line today. We'll send you the whole story.

SNAP—IT'S UP • Connection is made through a built-in plug in the fixture which engages the receptacle in the UNI-RACE. Any fixture may be put up or taken down at will without interrupting other fixtures on the circuit.

VARIABLE SPACING • ORTHO units may be mounted in continuous rows or spaced at intervals of 4, 8, 12 or more feet. Fixtures may be added, removed and rearranged any time by one man without tools.



® AND PAT. PENDING

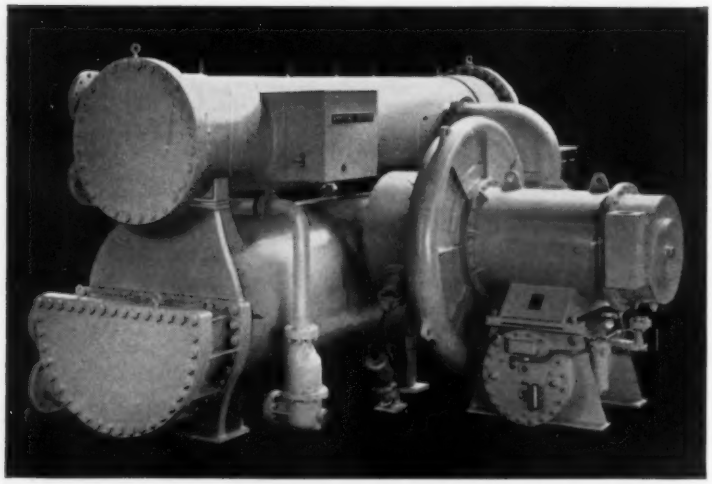
Gibson LIGHTING

GIBSON Manufacturing Co.

1919 Piedmont Circle, N.E. Atlanta 5, Georgia

Cuts cooling, installation, and maintenance costs!

SINGLE-STAGE TONRAC® INSTALLS ON ONE LEVEL

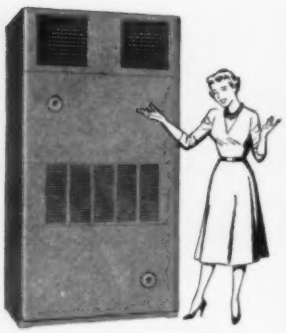


American Blower Tonrac automatically maintains chilled-water temperature, *regardless of load!* Requires no built-up bases.

An advanced-design, hermetic centrifugal refrigerating machine – Tonrac comes complete, ready for installation on *one* level. No build-up bases, flexible couplings, or speed-increasing gears are needed: The single impeller is directly driven by a constant-speed 3600 rpm motor. Saves weight, space, installation costs!

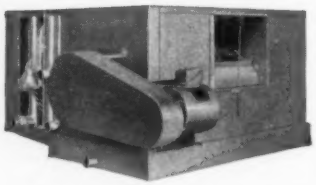
Tonrac cuts operating and maintenance costs, too, for it achieves compression in *one* stage . . . allowing two-bearing construction, and eliminating compression losses and power waste that are common with multi-stage units. This single-stage, hermetic design – with its inherent simplicity and few moving parts – assures quieter operation: makes even the roof an ideal location for Tonrac!

For full facts, call our nearby representative. Or write direct for Bulletin 1426.

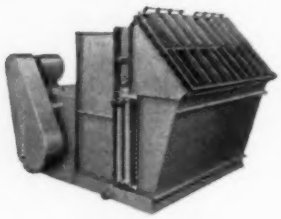


Packaged Air Conditioners for offices, stores, industrial plants, and similar applications. Cools without chilling. 3- thru 20-ton capacities.

American Blower equipment answers all your air conditioning needs



Central-Station Air Conditioners



Multi-Zone Air Conditioners

American Blower offers a complete product line, designed and engineered to meet the exact specifications of your air conditioning requirements. Call on us, today, and pinpoint equipment responsibility for your entire system!

American Blower products serve industry

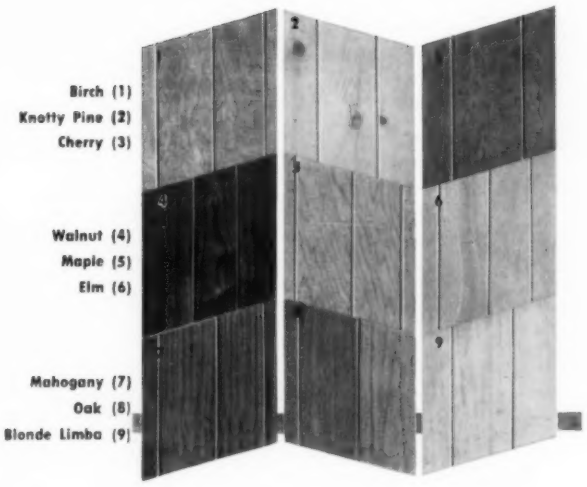
- Air Conditioning, Heating, Ventilating Equipment
- Mechanical Draft Fans
- Industrial Fans and Blowers
- Centrifugal Compressors
- Gyrol Fluid Drives
- Dust Collectors
- Refrigerating Machines

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO
Division of American-Standard

AMERICAN BLOWER

Air conditioning equipment for every business

Here's decorative beauty that never fades . . .



Craftwall

GENUINE WOOD PANELING
professionally finished
with that hand-rubbed look

So much for beauty! Now
turn page for a pretty picture
in economics

Roddiscraft
RODDIS PLYWOOD CORPORATION, Marshfield, Wisconsin

When it comes to interiors— everyone's talking about . . .

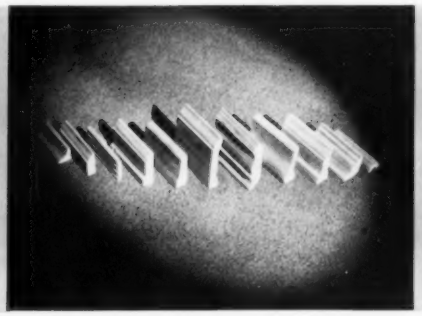
Craftwall beauty with a practical air

Great things are happening to interiors everywhere. All over the country, the big news in wall coverings is Craftwall genuine wood paneling. More and more architects, designers and decorators are taking advantage of Craftwall's limitless design opportunities . . . its truly functional character and remarkable ability to grow more beautiful with age.

Diamond-tough finish — With Craftwall, beauty is assured. The durable craft-finish stays crystal-clear over the years. It won't craze or yellow with age. The panels are carefully wrapped and pre-packaged. They arrive on the job in first-class condition . . . ready for quick, fuss-free installation.

Three provocative styles — Hailed for its remarkable ability to stimulate interesting decorative ideas, Craftwall has three styles for the nine beautiful woods. Style 100 is vertical v-grooved, creates a random-planked effect. Style 300 is vertical v-grooved, cross-scored and pegged, while Style 400 is v-grooved for a horizontal planked effect.

EASY INSTALLATION is assured by three convenient panel sizes — 48 by 96 inches, 16 by 96 inches and 32 by 64 inches. Panels nail in place quickly . . . stay flat, straight and true. Immediate, perfect results!



COMPLETE-JOB PACKAGE includes complete selection of hardwood molding and trim . . . plus new Roddiscraft panel-matched finishes in the nine Craftwall wood tones . . . putty sticks that make nail holes vanish.

BEAUTIFUL PERMANENCE eliminates the costly mess of periodic painting or wallpapering. Professional finish protects forever . . . shrugs off oil, ink, water and abuse . . . wipes clean in seconds.

See your dealer or use coupon for facts about Craftwall. When in New York, visit the Roddiscraft Rockefeller Center Showroom, 620 Fifth Ave.

Roddiscraft

RODDIS PLYWOOD CORPORATION
Dept. AR-556, Marshfield, Wisconsin

I want more facts, including cost data, about Craftwall plywood paneling.

Name .....

Firm .....

Address .....

City .....**Zone** .....**State** .....

Craftwall®

GENUINE WOOD PANELING

— Professionally finished with that hand-rubbed look

A.O.Smith

Permaglas®

makes profits easier

with the most modern, most value-packed

HEATING and COOLING LINE

the industry has ever seen!

Here's a heating and cooling line that's practically FUN to sell! The striking exteriors of these new *Permaglas* units stop prospects—appeal to women as much as men.

But there's far more than looks here! You can easily show prospects that here is the only really *balanced* heating and cooling line they've ever seen, with heating and cooling units that have been engineered *together*, to work perfectly together, without compromise.

You can *show* them the A. O. Smith High Temperature Ceramic Coating, and prove to them easily how corrosion from high temperatures has been ended, and how rusting from the condensation that always goes with summer cooling has been stopped. The 10-year guarantee on the heat exchanger is a clincher!

Then you can tell them how exclusive A. O. Smith Modulation with the Magic-Heet Control (optional on gas-fired units) gives them full-time comfort instead of the heating in spurts that's always the mark of "on-off" heating. When you show them how the flame adjusts itself to heating needs, they're really SOLD!

And back of all this you have a complete line. Oil-fired and gas-fired warm air units. Gas-fired boilers. Conversion gas burners. Hi-Boys, Lo-Boys, Down-Flows, Horizontals. Year-round units for oil or gas. Horizontal, remote, or integral cooling units, too, for water or air in most cases.

All of it guaranteed by A. O. Smith with A. O. Smith Product Service Branches to provide nearby assistance and quick access to replacement parts.

You couldn't hope for more—and neither can your prospects.

Permaglas® is on its way

... Are You Aboard?

Sales Department, Permaglas Division
A. O. SMITH CORPORATION, Kankakee, Illinois Dept. AKCh R-556
Please rush me details about Permaglas Heating and Cooling.

Name.....Title.....

Company.....

Address.....

City.....Zone....State.....

Through research ...a better way

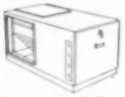
A.O.Smith
CORPORATION

Permaglas Div., Kankakee, Ill.
International Div., Milwaukee 1, Wis.

the only really balanced line ever built

YEAR-ROUND UNITS
Oil or Gas—100,000 to 160,000 BTU's. 2, 3 or 5 tons. Water or air.

VERTICAL COOLING UNITS
2, 3 or 5 tons. Water or air.



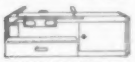
HORIZONTAL COOLING UNITS
2 or 3 tons.

REMOTE COOLING UNITS
2, 3 or 5 tons. Water or air. 3 evaporator arrangements.

HI-BOYS
Gas—70,000 to 200,000 BTU's.
Oil—0.75 to 1.75 gph.

LO-BOYS
Gas—85,000 to 200,000 BTU's.
Oil—0.75 to 1.75 gph.

DOWNFLOWS
Gas—70,000 to 200,000 BTU's.
Oil—0.75 to 1.75 gph.



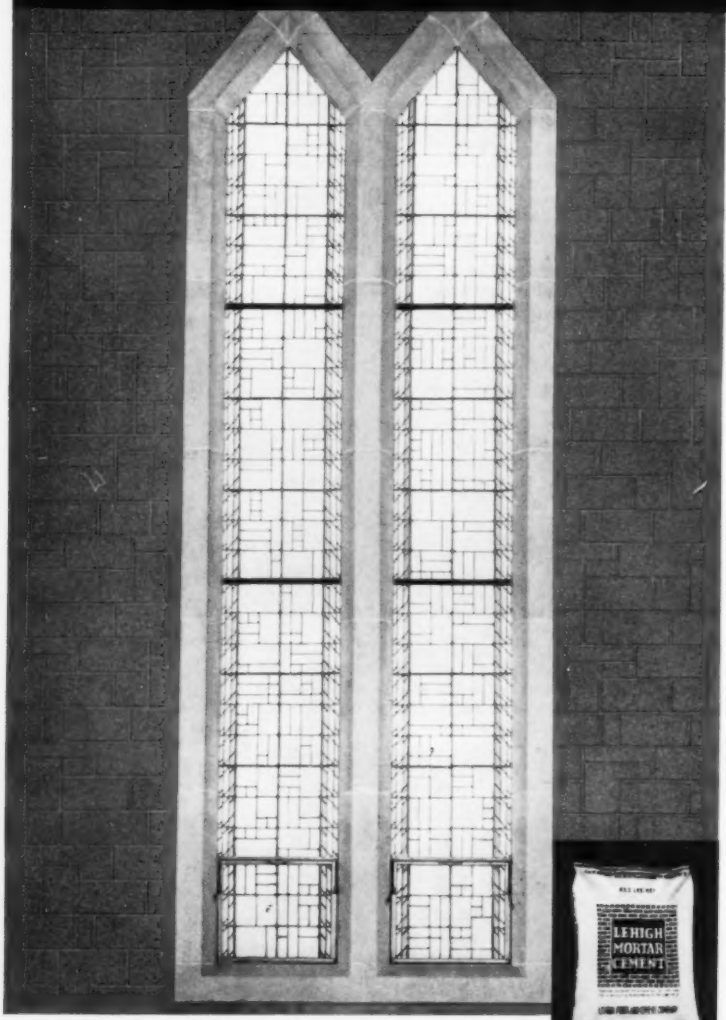
HORIZONTALS
Gas—60,000 to 140,000 BTU's.

GAS CONVERSION BURNERS
120,000 to 345,000 BTU's

HOME HEATING BOILERS
Gas—110,000 to 420,000 BTU's.

... and every one competitively priced!

"MORE WORK ACCOMPLISHED WITH LESS EFFORT"



Exposed concrete block lends simple beauty and dignity to the interior walls of this church.

"In the new First Presbyterian Church of Ponca City, Oklahoma, we used Lehigh Mortar Cement with Haydite block, common brick, face brick and stone, and it worked just as well with one as the other," writes Mr. Leo Goatley, the mason contractor. "I've used it for over three years and have never been disappointed."

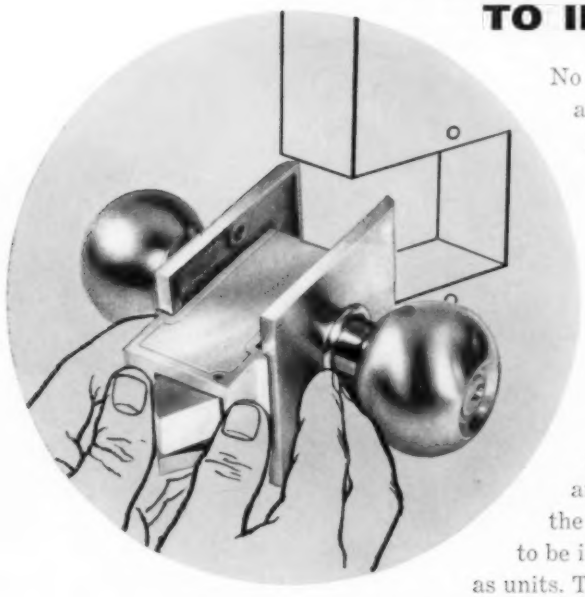
Mr. Wm. Robertson Jr. of The Robertson Company, general contractor on the job, sums up his preference for Lehigh Mortar Cement this way. "Masons agree that the texture and workability of Lehigh Mortar Cement enables them to get *more work accomplished with less effort.* And this is very important since labor costs represent the major share of the total job."

This is the kind of satisfaction Lehigh Mortar Cement is giving on countless jobs all over America. You can approve its use with the assurance that it exceeds the requirements of the most rigid Federal and ASTM Specifications.

Architect: SHAVER & SHAVER, Salina, Kansas

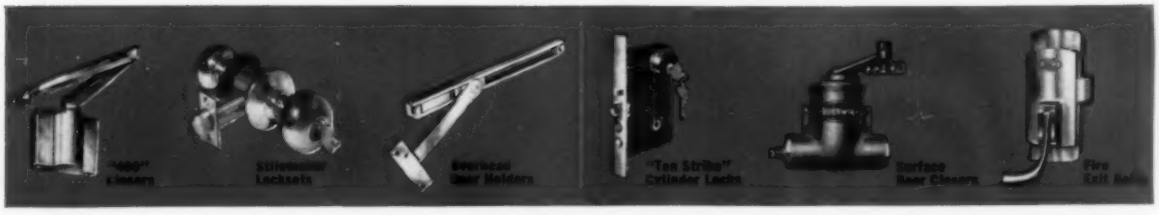
LEHIGH PORTLAND CEMENT COMPANY *Allentown, Pa.*

LOCKS THAT ARE PRACTICALLY FOOLPROOF TO INSTALL!



No special skill or tools
are required to install
Russwin Unilocs precisely.
This operation only involves sawing
two slots in the door stile,
knocking out the notch,
truing the back of the notch,
drilling two small holes
for through bolts, then slipping
the lock into the notch and
tightening the through bolts.
It's as simple as that
mainly because *Unilocs*
are completely preassembled at
the factory. They are designed
to be installed and removed
as units. Their installation is made
without any disassembling of locks, knobs
or escutcheons . . . not only saving considerable
time, but also eliminating
any chance of misapplication
or misalignment of parts.
Everything about *Russwin Unilocs*
reflects "the economy of quality"
from their extremely rugged parts
to their trouble-free
installation. Here is a
symphony in lockmaking.
For complete information
contact your authorized
Russwin Consultant.
Russell & Erwin Division,
The American Hardware Corporation,
New Britain, Conn.

SINCE 1839
RUSSWIN®
DISTINCTIVE HARDWARE



Dur-O-waL Adds STRUCTURAL SOUNDNESS to Masonry Walls

Butt weld Dur-O-waL lies flat in the mortar bed . . . . handles fast . . . . provides crack control for every type of masonry wall.

6 Reasons why Architects Specify Dur-O-waL

- Dur-O-waL combats cracks; safeguards beauty
- The trussed design makes all steel work as a unit
- Dur-O-waL meets ASTM Specification A82-34
- Dur-O-waL handles fast, assures tight mortar joints
- Dur-O-waL's performance has created its demand
- Dur-O-waL is nationally distributed; dealers everywhere

Trussed Design

Butt Weld • Deformed Rods

DUR-O-®WAL

the Backbone of Steel for EVERY masonry wall

Phone, wire, or write Dept. 5J for additional information about Dur-O-waL

See our catalog in SWEET'S 2c/Csd

Dur-O-waL Div., Cedar Rapids Block Co., **CEDAR RAPIDS, IA.** Dur-O-waL Prod., Inc., Box 628, **SYRACUSE, N.Y.** Dur-O-waL of Ill., 119 N. River St., **AURORA, ILL.** Dur-O-waL Prod. of Ala., Inc., Box 5446, **BIRMINGHAM, ALA.** Dur-O-waL Prod., Inc., 4500 E. Lombard St., **BALTIMORE, MD.** Dur-O-waL Div., Frontier Mfg. Co., Box 49, **PHOENIX, ARIZ.** Dur-O-waL, Inc., 165 Utah St., **TOLEDO, OHIO**

It's Hot-Dip Galvanized

Corrosion is costing the United States over five billion dollars a year, according to figures recently released. Companies today are taking a hard look at rust prevention costs. They are finding that Hot-Dip Galvanizing is the best solution to their problems. They know that items like chain-link fence, roofing, gutters, window sash, and many others will last longer if Hot-Dip Galvanized after fabrication. Over a period of years maintenance costs are kept to a minimum.

When you specify rust protection for your new buildings, specify Hot-Dip Galvanizing, the best rust protection you can buy. For the best in Galvanizing, have your products sent to a member of the AMERICAN HOT DIP GALVANIZERS ASSOCIATION—he has the know-how to give you a top quality job.

Send today for our new booklet "Stop Rust." It gives you the full story on the process, plus a comprehensive coating comparison chart. "Must It Rust" 16 mm film available for showing.

AMERICAN HOT-DIP GALVANIZERS ASSOCIATION

1506 FIRST NATIONAL BANK BLDG., PITTSBURGH 22, PA.

The greatest achievement in all-wood solid core doors...

Guaranteed in writing for the life of the installation

Here's the first all-wood, staved core door with a lifetime guarantee. It's backed by one of the world's major insurance companies. Owners are fully indemnified against warping, twisting, or manufacturing defects as outlined in standard door guarantee of the National Woodwork Manufacturers' Association. And Roddiscraft will pay the rehanging and refinishing costs, of a reasonable nature, for any door found defective within the meaning of its guarantee. The Golden Dowel offers you all-wood construction . . . stability of the staved core . . . the time-defying features of Roddiscraft's exclusive technique of TIME CONDITIONING. Add to this, fire resistance proved in tests by independent laboratories — and the "peacekeeping" average sound transmission loss of 31 decibels.

You'll recognize the Golden Dowel door by the distinctive golden serial plate above. Each bears a registered number which is recorded on the Certificate of Guarantee prior to installation.

***Write for copy of** our new door catalog. Or find complete specifications in Sweet's Architectural File. When in New York, visit the Roddiscraft Rockefeller Center Showroom, 620 Fifth Ave.*

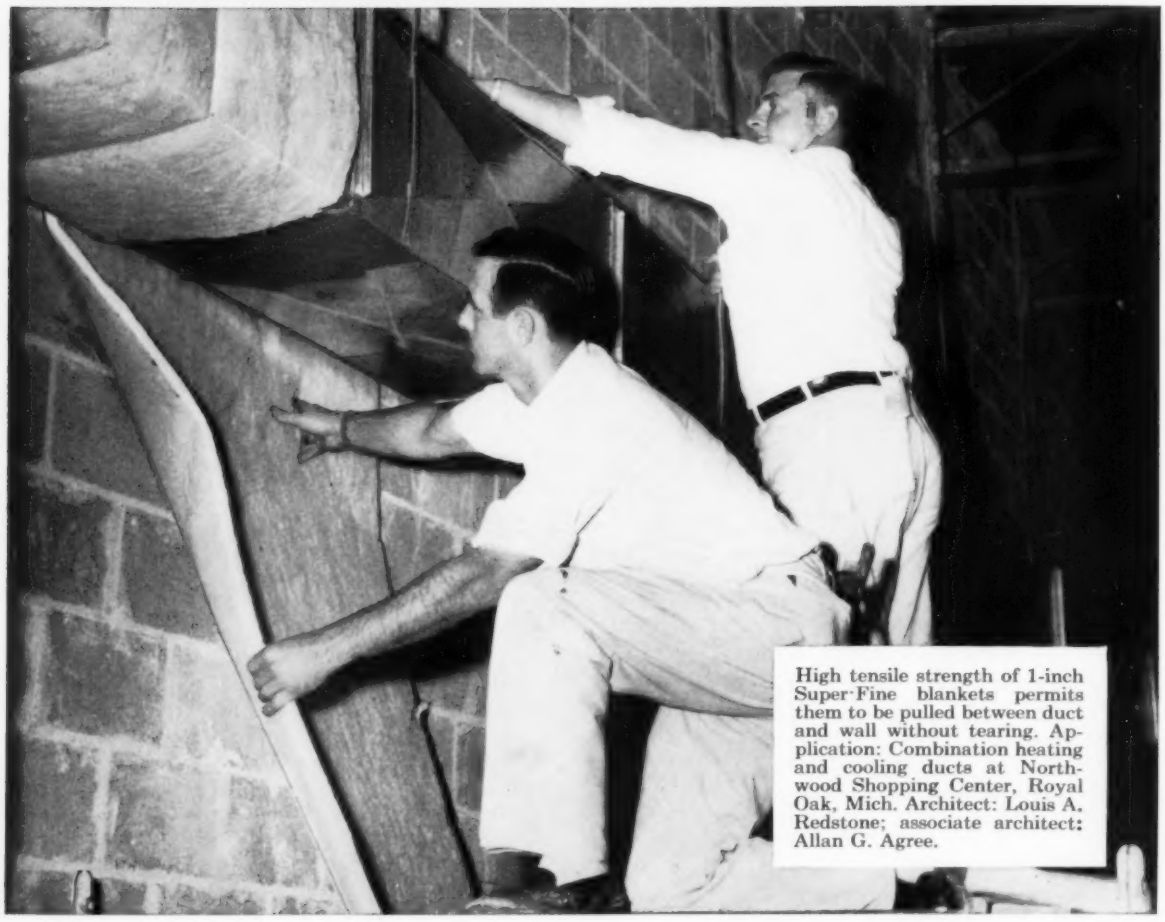
Roddiscraft

ONE SOURCE FOR ALL YOUR DOOR NEEDS

Solid Core • Hollow Core • X-Ray • B Label Fire

RODDIS PLYWOOD CORPORATION, Marshfield, Wisconsin • *Warehouses in principal cities*

INSULATION news from L·O·F GLASS FIBERS COMPANY



High tensile strength of 1-inch Super·Fine blankets permits them to be pulled between duct and wall without tearing. Application: Combination heating and cooling ducts at Northwood Shopping Center, Royal Oak, Mich. Architect: Louis A. Redstone; associate architect: Allan G. Agree.

New shopping center benefits in 3 ways with efficient Super·Fine duct insulation

Like architects Louis Redstone and Allan Agree, you will find that L·O·F Glass Fibers' Super·Fine duct insulation offers three important advantages to your clients . . .

1. High insulating efficiency. Super·Fine's long, fine glass fibers form millions of dead air cells, effectively reducing heat loss or gain.

2. Longer life. Resilient Super·Fine retains its thickness and insulating efficiency indefinitely. Inorganic glass fibers will not support combustion, absorb moisture, rot or decay.

3. Swift, money-saving installation. Lightweight Super·Fine blankets are pleasant to handle; cut easily with an ordinary knife. Without precision measuring or fitting, they were simply wrapped around adhesive-coated ducts and secured with light-gauge wire. Strong and resilient, they were pulled between wall and duct—were fitted readily into irregular and hard-to-reach places.

Super·Fine is also used as duct liner to reduce sound in air-conditioning ducts. It is an excellent sound absorber, especially in the high-frequency range.

FREE FOLDER—Shows how L·O·F Glass Fibers' Super·Fine can benefit *your* clients, write: L·O·F Glass Fibers Company, Dept. 79-56, 1810 Madison Avenue, Toledo 1, Ohio.

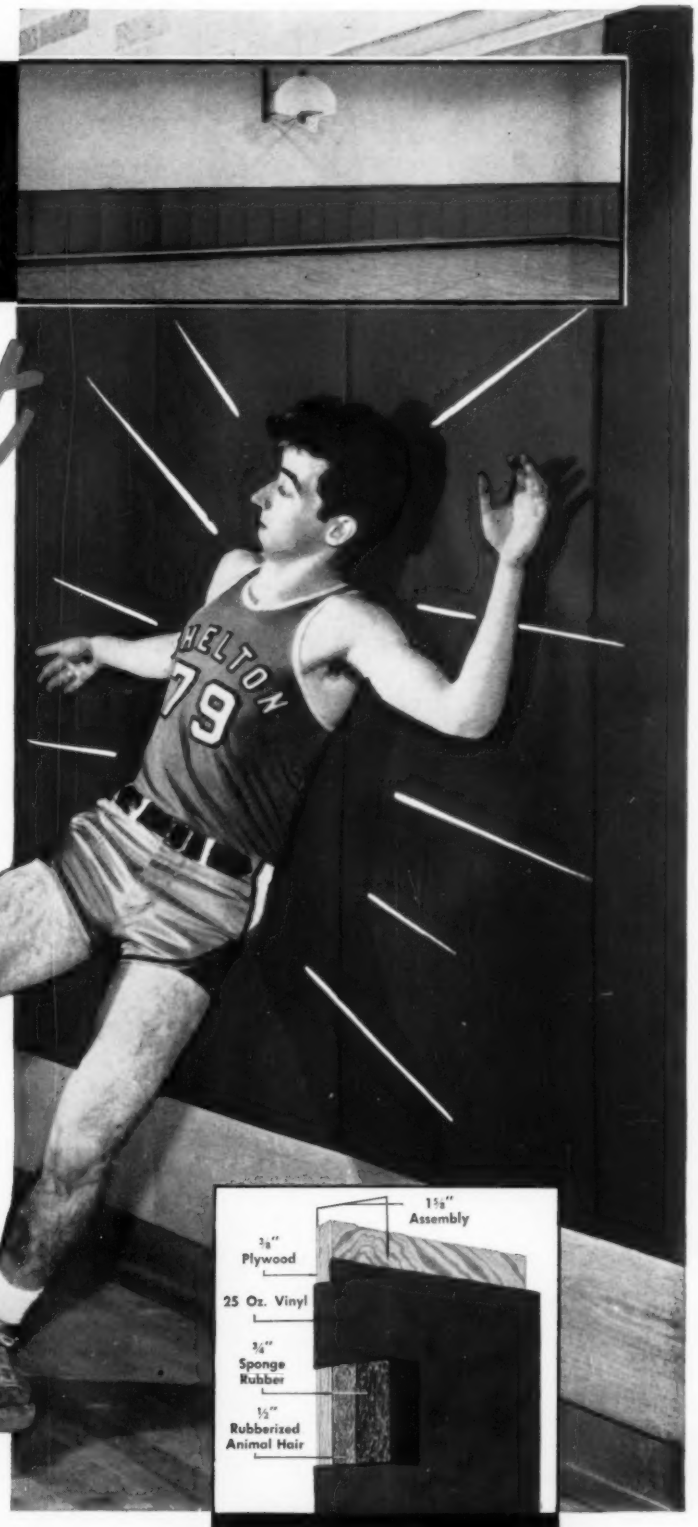
L·O·F GLASS FIBERS SUPER·FINE INSULATION

L·O·F GLASS FIBERS COMPANY

TOLEDO 1, OHIO

Makers of glass fibers by the exclusive "Electronic-Extrusion" process

Prevent wall crash accidents in gyms and class rooms!



Medart

Attractive

SAFE-WAL

Rubber-cushioned Vinyl-covered

WAINSCOT

A new development—already proved in scores of schools everywhere—designed especially to guard against injuries from body impact against walls of multi-purpose play rooms and gymnasiums.

Sound-absorbing and sanitary, handsome SAFE-WAL costs no more than many types of hard surface wainscoting—eliminates costly wall protective mats, tile or terra cotta facing, wood paneling, plaster, other wall finishes—is easy to install over rough walls—is resistant to dirt, grease and moisture—requires no maintenance except occasional cleaning. Made in tan, green or gray.

Ask for complete brochure

Section thru SAFE-WAL shows durable construction. Standard panels are 2'0" wide; 5'0", 5'6" or 6'0" high. Filler panels are 1'0" wide. Special sizes made on order. Cutouts around switch plates, fountains, other wall elements, are easily, neatly made at time of installation.

SPECIFY the best, then INSIST on it!

FRED MEDART PRODUCTS CO., INC.

3540 DE KALB ST. • ST. LOUIS 18, MO.

SEE OUR CATALOG IN SWEET'S

A ROOF IS TO KEEP OUT THE RAIN Architects and builders have long preferred one particular built-up roof—the Barrett SPECIFICATION* Roof. Their reasons are sound: construction according to the famous Barrett published specifications . . . established qualities and known quantities of materials . . . application by approved roofers . . . inspection by Barrett's own roofing experts . . . Surety bond against maintenance expenses for up to 20 years. This is a roof that's time-tested, yet precisely right for that *ultra-modern design on your drafting board today!*

BARRETT DIVISION, Allied Chemical & Dye Corporation, 40 Rector St., New York 6, N. Y.

School: Hollow Tree Elementary School, Darien, Conn. Architects: Ketchum, Gina & Sharp, N. Y. C.
Roofer: Barrett-Nonpareil, Inc., Norwalk, Conn.

BARRETT ROOFS

...they outlive the bond!

*Reg. U. S. Pat. Off.

Main display area, Styling Auditorium

GM Photo by Faryna

A TOUR OF THE GM TECHNICAL CENTER INTERIORS

General Motors Technical Center, Mich., Eero Saarinen & Associates, Architects

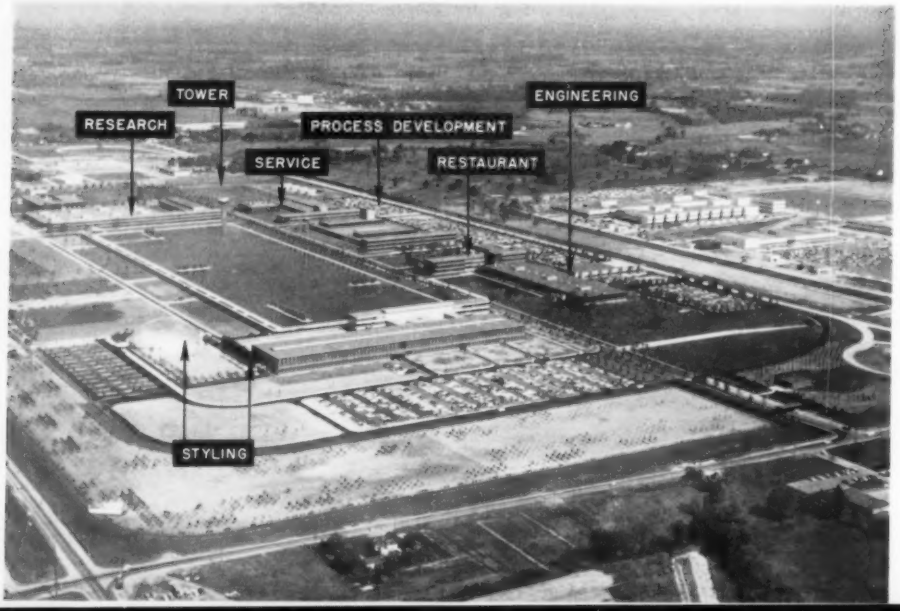
Smith, Hinchman & Grylls, Architect-Engineer; Bryant & Detwiler Co., General Contractor; Argonaut Realty Division of GM, Field Supervision; Thomas D. Church & Edw. A. Eichstedt, Landscape Architects; Bolt, Beranek & Newman, Acoustic Consultants; Richard Kelly, Exterior Lighting Consultant

THESE PICTURES have been chosen as representative of the character achieved in the principal interior areas of the Center, due to be formally dedicated this month.

The Styling Auditorium, one of the most significant spaces, is covered by a double dome. The outer (structural) thin shell, of $\frac{3}{8}$ in. welded steel plates, spans 186 ft, rises 65; supports the inner acoustical shell of $\frac{1}{8}$ in. perforated metal, backed up by terraced layers of acoustic fill. 225 KW of light from incandescent and mercury vapor lamps provides 140 FC of almost totally diffuse illumination.

Lobby of Process Development Administration Building

© Ezra Stoller



GM Photo by LaVue

Lobby of Central Restaurant Building

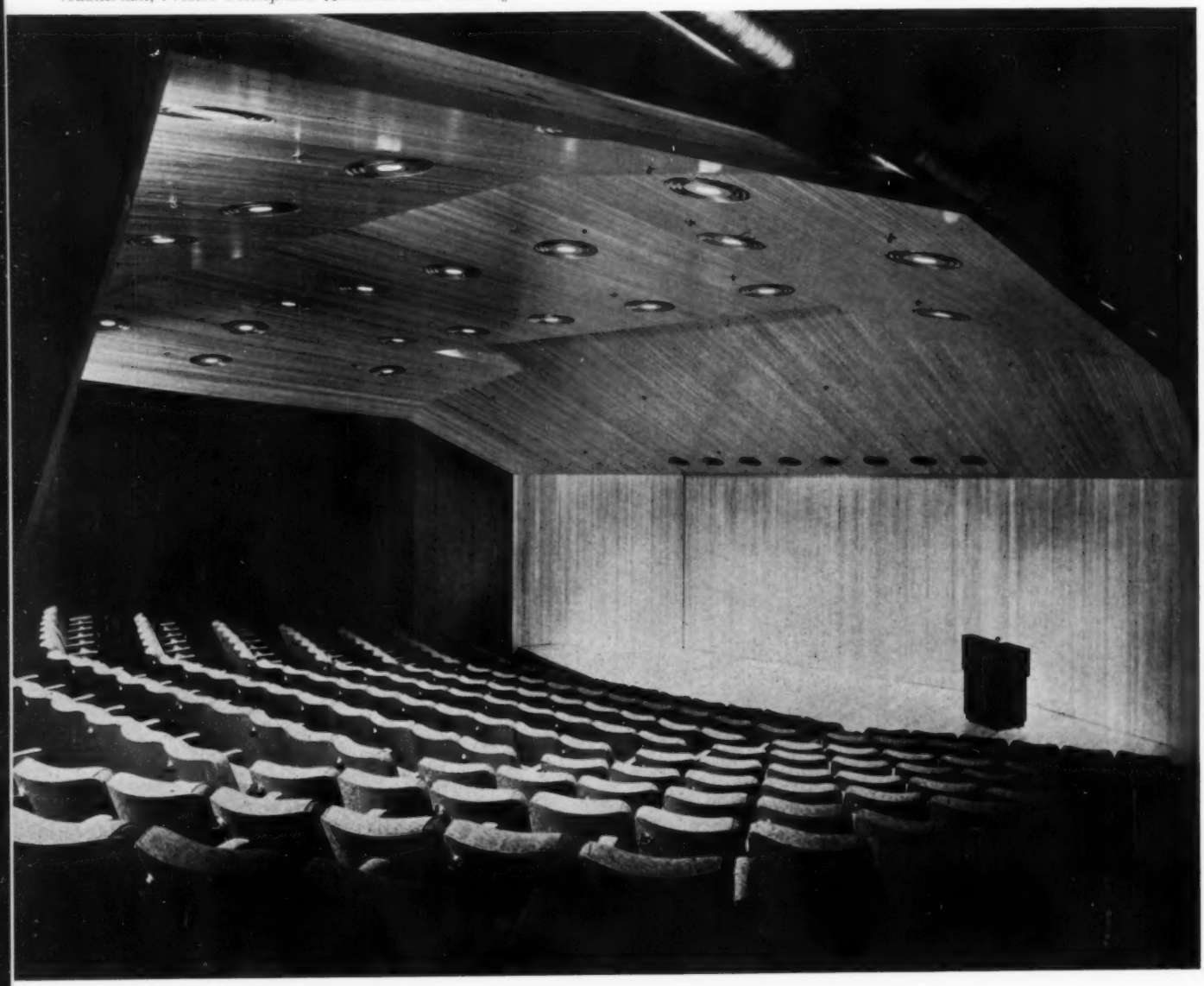
© Ezra Stoller

INTERIORS—GENERAL MOTORS TECHNICAL CENTER

Lobby of the Process Development Administration Building features architect-designed furniture, upholstered in white plastic and supported on stainless frames. The metal reception desk is of special design. Carpeting is a nubby-textured mixture of tan, beige and ivory, designed and woven by Marianne Strengel. A skylight between lobby and building visually separates these elements; accents the planting.

In the **Central Restaurant Building,** a decorative metal screen by Bertoia separates lobby and dining areas. The lobby floor and stair bulkheads are travertine, the handrail teak on stainless uprights. The dining area, raised for better view, is floored in black terrazzo. The glass curtains are natural color fishnet.

Auditorium, Process Development Administration Building



Library, Research Administration Building

Second Floor Office Lobby, Research Section

© Ezra Stoller

INTERIORS—GENERAL MOTORS TECHNICAL CENTER

The Process Development Auditorium is essentially a freestanding acoustical shell of basswood set within a royal blue cube formed by fabric covered walls and carpeted floor. The shell works so well the PA system is used only for sound film.

In the **Research Library,** space along the outer wall becomes a series of reading lounges opening to the shelves. A color scheme of light and dark grays creates a serene atmosphere. The aluminum and milky-white plastic ceiling combines lighting, sprinkler heads, high-velocity air diffusers, and acoustical baffles.

This **Executive Office Lobby** combines an interesting variety of materials with taste; features a Marianne Strengel "rug within a rug" to define the waiting area.

Cafeteria, Styling Administration Building

GM Photo by LaRue

Typical Styling Studio

© Ezra Stoller

Cafeteria, Research Administration Building GM Photo by LaRue

INTERIORS—GENERAL MOTORS TECHNICAL CENTER

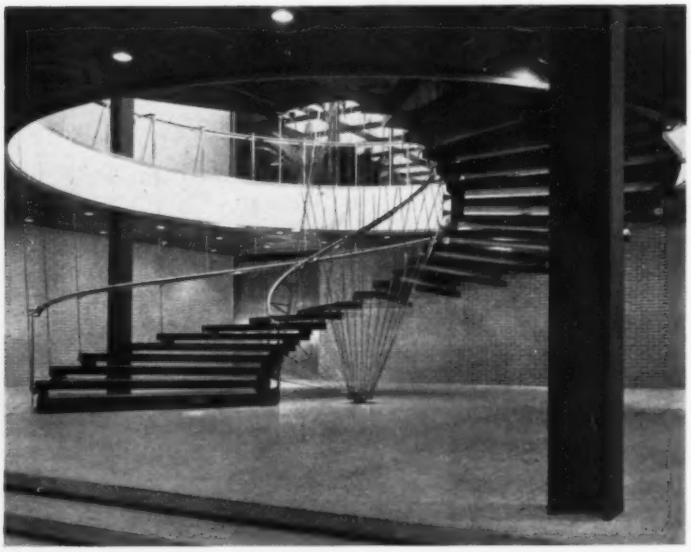
The Styling Cafeteria contains off-white table tops, black plastic chairs on chrome legs, orange plastic banquettes, and a floor of alternating 2 in. strips of cream and orange colored vinyl plastic. Glass curtains are natural color fishnet.

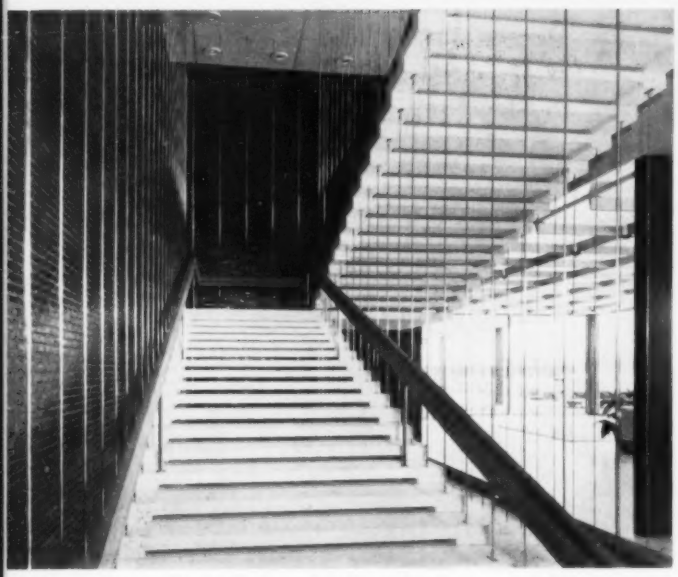
The Styling Studio, typical of the 16 in the section, is about 55 by 80; incorporates a large space for studying several mockups or actual vehicles. Four sets of sliding blackboards and corkboards — with a traveling seat — form the end walls.

In the **Research Cafeteria,** the columns are matte black tile, the floor is white terrazzo, the walls are blue-glazed brick, and the cafeteria-line screen is made of 21 varieties of wood. Suspended ceiling baffles are aluminum, gold-anodized.

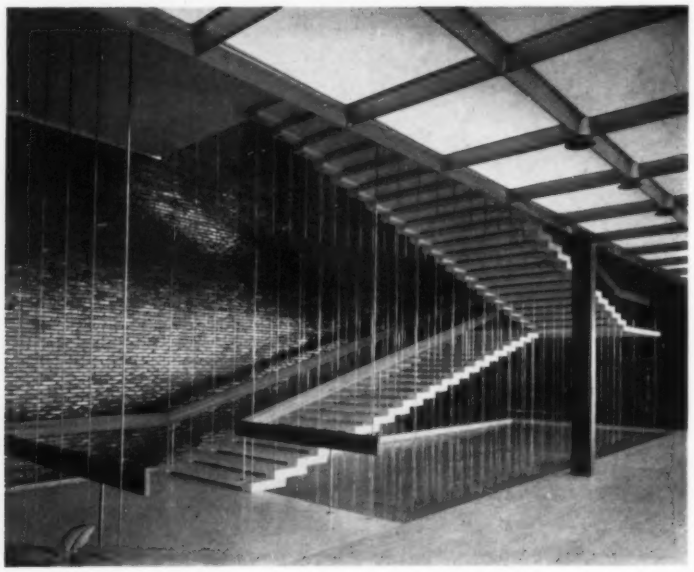
Service Administration Building Stair

Research Administration Building Stair





Styling Administration Building Stair



Top photos, © Ezra Stoller. Lower, GM Photos by LaRue

INTERIORS—GENERAL MOTORS TECHNICAL CENTER

Important Stairs have been treated as free-standing technological sculpture. That in **Service Administration** consists of travertine treads in metal pans, held by a continuous spinal beam of structural steel painted white. In **Research Administration,** the granite treads "float" in a converging double cone of stainless steel tension rods. Lateral stability comes both from shear blocks and from the compression ring formed by the stair proper. The **Styling Lobby** stair features white terrazzo treads slung within a vertical pattern of stainless steel rods against a black glazed brick wall. The floor and reflecting pool are of travertine; the handrail of teak. Blue underwater lights add color to the shimmer of the circulating water.

ARCHITECTURE OF THE LOS ANGELES REGION

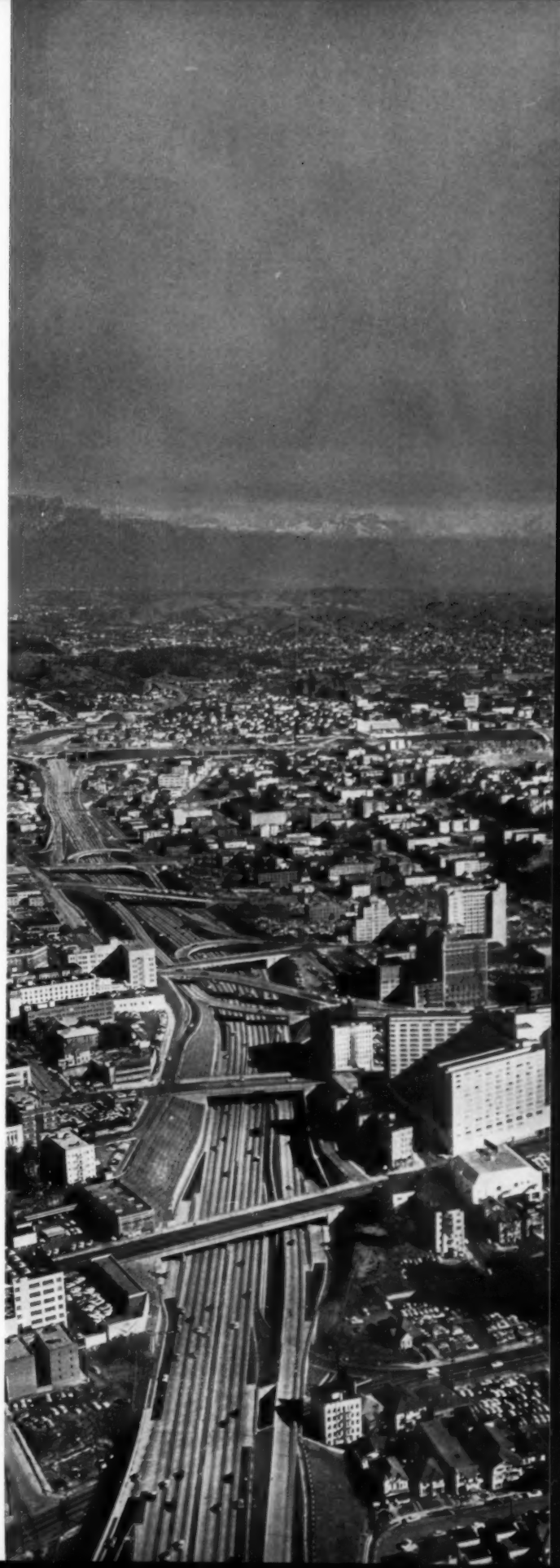
By ARTHUR B. GALLION
Dean, School of Architecture
University of Southern California

A VISITOR ONCE REMARKED that Los Angeles was like a magic carpet — it could roll up and drift off overnight. That was many years ago. Since then three million people have occupied the city and a million and a half have settled in the immediate environs. The pace keeps on at an alarming rate. The intervening years have revealed the phenomenon of Southern California.

This valley is not naturally endowed with the lush verdure of the deep south, the majestic forests of the northwest, the black soil of the mid-west, the rolling green hills of the east, nor the magnificent topography of land and sea of its neighbor to the north — San Francisco. The site is a desert plain, washed by the sea on two sides, embraced by the mountains on the other two. The desert has a peculiar charm. Its strange fascination is unorthodox. Its rich resources do not readily yield to the human touch. It had to be conquered, and conquered it was. Courage and lust for adventure were needed to work this rugged terrain into a new land. Transformation of the desert called for imagination, and men of ideas and enterprise were invited to join. Water was brought from the high Sierras and the Colorado River 250 miles distant. A harbor was dug out of the sea twenty-five miles away. The desert soil gave forth an abundance. Agriculture became an industry. Oil spouted riches. The mild climate attracted throngs seeking excitement, opportunity, relaxation and retirement. Perhaps it is this background to which we may attribute the ready acceptance of new ideas in the region.

The pseudo-Spanish style, popular during the roaring Twenties, was not an indigenous expression. It introduced good taste to the melee of wild and flourishing expansion, but it was a form of eclecticism. The "ranch" house was quite another matter. It was native. Built of the soil on which it stood, shaped to the climate and the gracious living of the Spanish Dons, it fulfilled its purpose with charm and comfort. The Twentieth Century version of the "style" is an unhappy adultery of this tradition, but the region came by it honestly. Its successors were fakes, but the original was genuine.

The ranch house was an appropriate dwelling. It was squeezed into artificial forms by the forty and



Irving Gill, architect

Greene and Greene, architects

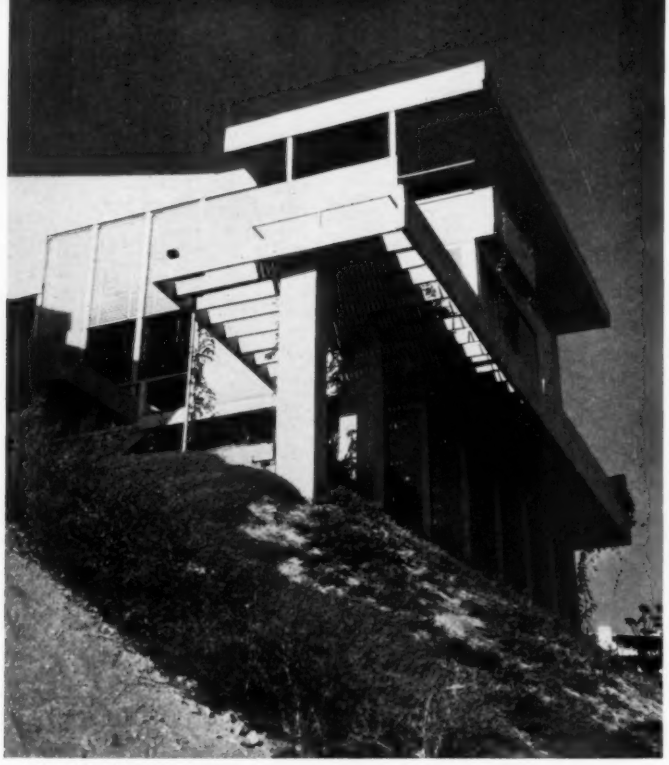
Frank Lloyd Wright, architect

fifty foot lots of later subdivisions, but the privacy of the patio provides a natural and becoming framework for graceful living. Land supervision forced modifications of the theme and new relationships in the economy induced variations in construction. The constant influx of people streaming in from all directions kept the melting pot of ideas well stirred. A variety of architectural forms emerged but the informal and intimate connection between the house and garden continues.

Much has been written about regionalism. The regional expression of the southwest can hardly be perceived beyond this intimate relation between enclosed and open, covered and uncovered, space. The climate and the informal habits of the people account for this more than tradition. The mixture of people in southern California has diluted the significance of tradition. The continuity which entrenches a tradition was broken with the dissolution of the great ranches of the gay caballeros. A new tradition has formed, and a rather important one these days: a tradition of opportunity to compete with ideas.

This is fraught with danger, the danger of too much novelty. Ample evidence is present in Los Angeles. Awful mediocrity in taste and assortment is abundant. There are times when change is too frequent, when the time for assimilation and maturity is inadequate. Variety then becomes a nervous disorder. Los Angeles is afflicted with this disease. Shrieking for special credit, a carnival of oddities in architectural form diffuses throughout the region.

But there is another side to this coin. There are men of ideas in many places and, though somewhat fewer, there are men willing to listen. But the places in which men are willing to build them are more rare. Los Angeles is one of these. If novelty is a heavy burden it is lighter than the intolerance and smug complacency which



R. M. Schindler, architect

Richard Neutra, architect

Richard Neutra, architect

stifle creative expression. Far better it is to indulge in experiments with structure and form than the false security of the status quo. Important and exciting architectural forms have pierced the shallow film of novelty. The persistent variety of well-considered planning, thoughtfully organized structure, and sensitively arranged materials, attests to the genuine capacity of the talent at work in southern California.

Contrary to the usual assumption, however, it cannot be claimed that a regional expression has emerged. What is regionalism anyway? The term has acquired a magic significance associated a few years ago with the "international style." Is it not as nebulous, and as misleading? Places, like people, have distinguishing characteristics, but it takes all types to form a civilized age. Local characteristics were reflected in the periods of past international styles — the Greek, Roman, Gothic. But it was the main theme of each of these periods that pervaded the known world. Times are different, as are conditions, but we are in the process of forming the great theme of our era; the local color is but a part of the whole composition. Regionalism, as frequently defined, pretends to occupy a niche of special significance when it is rather an evidence of a greater harmony aborning in our civilization.

Southern California has provided an environment of freedom for expression which produced the remarkable achievements of the Greene Brothers and Irving Gill at the turn of the century; the distinguished work of Richard Neutra and Rudolph Schindler since the Twenties. Frank Lloyd Wright found a stimulus to his genius and many others have found opportunity for their talents over the years. There is little reason, however, to suppose that the architecture of these men fit this area to the exclusion of all others. The residential architecture of Quincy Jones, Whitney Smith, Craig

Raphael Soriano, architect

Raphael Soriano, architect

ARCHITECTURE OF THE LOS ANGELES REGION

Ellwood, Harwell Harris or Raphael Soriano is not confined by its nature to the southern California region. Even the great controlling force, the climate, has lost its fierce grasp upon planning and design; the distribution of materials and equipment in our economic system has broken most barriers. Southern California offers variety of expression in its architecture. As the creative vigor of our age gains strength this variety will not be confined to a region. There is evidence of an affinity between regions already, and variety within each. It is the opportunity for expanding this harmony through fresh thought and activity which will produce the indigenous expression of our own culture. Let us make our history before we attempt to write it.

Los Angeles has served as a convenient testing ground in many respects. Not the least of these is the form of the urban environment. Other congregations of large population grew from the center outward in a steady flow. As the inner core piled up the fringes spread; the urban form was a pyramid of building bulk and land values. Los Angeles still has its "downtown," but the extraordinary pressure of population movement to the region during the first quarter of the century caused an explosion over the countryside. Real estate subdivisions, which had been planted indiscriminately, blossomed into villages and thence into small cities. The variegated colors of wood and stucco spread across the landscape and punctuated another hopeful prospect for the future — the decentralized regional city.

The modern city has become a behemoth. The scale of the human being is lost. His identity has disappeared. He does not belong. The city is a place to make a living rather than a place to live in. The key to the door of this dilemma is the recovery of human scale in the city. Los Angeles may someday lose that scale but it has not yet disappeared. Despite the political complications,

Charles Eames, designer

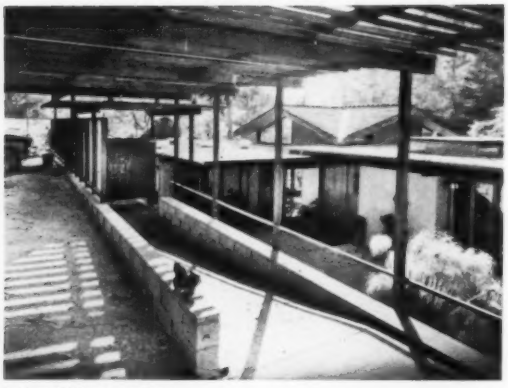
Craig Ellwood, designer

a jealous prerogative is asserted by the variety of separate communities that make up the region. The forty-sixth such community was incorporated as an independent city within the region this year. Each has its pride — not yet enough to admit its shortcomings, to be sure — but the people have a sense of belonging. Even those which have been absorbed within the big city boundaries persist in retaining a semblance of their identity.

This emphasis on human scale runs counter to the trend in the big picture of America. But perhaps we have not brought that picture into accurate focus. The prospect of the individual being engulfed by the tidal wave of a bigger and still bigger metropolis is not a pleasant one to conjure with. The problem of the future city, the central core of the city-dwellers' welfare, depends upon our ability to maintain the human touch, contact, scale, in the physical environment. The informal and independent, semi-rural and pseudo-sophisticated, condition of the Angeleno's mind may not be an unhealthy state of affairs.

From the center, the pattern of the region is one of undulating waves of low and high density. Developments like the Miracle Mile skipped from the city center over miles of undeveloped land in the Twenties. Clusters of tall buildings rose at one mile intervals, the intervening spaces improving spasmodically. The process has been disorganized and chaotic. The region is shapeless. It cries for order. Conventional mass transportation will not work. Vacant land is filling up with tracts of "no" and "low" down payment houses. The horizontal plane, once a desert floor, is now a waving sea of gravel and shingle roofs. The picture is as dismal as other great cities. But there is a difference. The city does not suffer from the horrible permanence that afflicts most cities. The heavy load of masonry piled high upon the

Harwell H. Harris, architect



Smith and Williams, architects

Quincy Jones, architect

whole surface of most cities is absent here. Wood frame and stucco offer less resistance to movement, to change. The appalling blight of the modern urban environment is a thick and heavy crust upon the land. The crust is thinner in Los Angeles. It can be more readily penetrated and scraped away. Replacing the old with the new is almost an obsession.

Congestion is horizontal rather than vertical, and the city is struggling to extricate itself from the traffic snarl. The city grew up with the automobile but the association has not been harmonious. The automobile spread the city over 450 square miles and linked it with its many neighbors over 1000 square miles. The density is too thin to support the familiar means of transportation — the surface and subway trains. The freeway dominates the scene. A new scale of space in the urban environment has opened up. A dynamic new urban form has moved into the city.

Visions of double- and triple-decked streets were once the dream for relief from the urban tangle. Neither they nor the subway struck deep enough at the underlying cause — excessive building space in proportion to circulation. The flying highways of the freeway system suggest a new direction. They are inadequate in number, location, and design, but they have opened up a new vista of the future city. It is not an easy matter to envision their promise while caught in the motionless traffic jam at the rush hour, but something was sorely needed to shock the urbanite from his lethargy in the archaic city streets. The freeway has provided that shock.

The restoration of space at the ground level may become the new crusade in city building and the design of the space enveloping buildings the new challenge. The visual drama of the great city of today is invariably impressed upon us from without, not from within. The

Welton Becket & Associates, architects

George Russell, architect

Smith and Williams, architects

"skylines" of New York and Chicago are not experienced by the man in the street, they are the vistas captured from distant vantage points. Whether dressed in the fashion of modernity or tradition, the façadism of the city street is oppressive.

There was a time when the initial step in the design of a building was the establishment of the major and minor axes of its composition. Now the first step is establishment of the "building line." The necessity for a separation between public and private property has been exaggerated as cities grew, population increased, and land values rose. The "building line," that phantom legal restriction from encroachment upon space reserved for public use, assumes a significance of increasing concern. Effectiveness of the device has been nullified by the increase in building height and bulk. Set-back zoning began too far above the street to compensate for the bloated burden. Street widening, still a popular antidote, is a pretense. The ratio of building bulk to open space, circulation, light, air, and psychological elbow room has dissipated the original function of the public right-of-way. The city has become a huge bulk of building volume serrated by fissures. These canyon walls were dictated by the "building lines."

The delight of ancient cities was the visual experience of three-dimensional form. Satisfaction of this sense is a deep yearning of the urban dweller. It is the attraction of large scale planning. Huge housing developments and regional shopping centers have returned the horizontal ground plane to the composition of forms in space. Recovery of this lost dimension in the urban environment transcends the economic advantages of large scale development. However, cities are not a series of large scale developments. Nor should we become dependent upon them if the enterprise we call free and

Welton Becket & Associates, architects

Welton Becket & Associates, architects

individual is to endure. The city is a composite of projects rising here and there as investment opportunities present themselves. Indifference to the urban welfare has squeezed the lots to substandard proportions, but the single lot continues to be the principle unit of land development. They are tied into blocks with the "building line." Lack of imagination mixed with varying quantities of greed, rather than the single lot, have produced the mediocrity of the city street.

Space is more illusory than real in Los Angeles but the cubical inhibitions of most commercial cities are relaxed. A three-dimensional character is vested in individual buildings with less effort than is customary in urban architecture. It is the plastic composition of form within the space of the property it occupies which distinguishes such a structure as the Prudential Building. Built on high-priced land, the building line was not the master of this plan. Perhaps the insistent demand for automobile parking has forced the issue of space in Los Angeles. Factories have moved to the open fields, shopping centers form clusters of neighborhoods, and the freeways cut broad swaths across the town. It is the reappearance of attention to the form of individual buildings along the street, however, which offers the prospect for a regeneration of visual delight in the urban scene.

The southern California region is like a rough sketch for a city — a preliminary plan drawn with bold strokes. Some parts have been executed in detail but the whole plan has not taken shape. It resembles a series of vignetted suggestions awaiting further study and development. The fluid nature of the region leaves much to be desired, but it also provides room for much that may yet be achieved. The ever-present prospect for acceptance of a fresh proposal is a stimulus to the creative energy of those working in the region.

Julius Shulman

HOUSE NEAR PASADENA FOR A FAMILY OF FIVE

Residence of Mr. and Mrs. Eugene Weston, III
La Canada, California

Eugene Weston, III
Designer

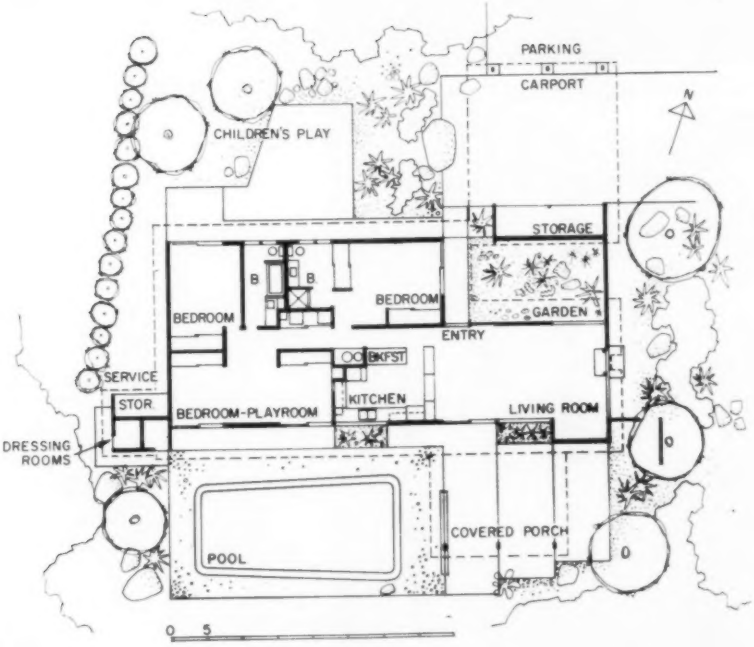
HOUSE NEAR PASADENA

A LARGE COVERED PORCH on one side of the living room and an enclosed garden on the other stretch the 1450 sq ft area of this house into comfortable accommodations for a family of five. The apparent size of the house is increased also by several features of the plan: kitchen and living room are separated only by a low storage wall; most solid walls extend only to the beams, with glass above that height; the wall between two of the children's rooms was omitted to provide an indoor play area. Circulation is limited to the center of the house, with the children's rooms and bath forming a separate unit. Utilities are economically grouped in one general area.

The house is situated in a rocky canyon overlooking Pasadena. Primary glass areas face south for view and sun control, and there are no openings to the west (hot) side. Construction is post and beam with plank roof, on an 8-ft module. All interior and exterior walls are plywood (which has "proved very low on maintenance," the owner reports); floors are cork throughout "for color, resilience and warmth." Heating is floor-radiant, in deference to the children.

Indirect lighting was installed above all wardrobes to provide room light as well as light within the cabinets and to eliminate ceiling fixtures. Identical sliding units were used for all exterior doors, and in most rooms double as ventilation and light sources. Horizontal muntins in these doors permitted the use of light-weight glass to facilitate their operation — an important point for the children.

Julius Shulman



Julius Shulman

HOUSE NEAR PASADENA

Entrance from carport and guests' parking area leads past enclosed garden which living room overlooks. Children's bedrooms open into large play area, and have excellent storage space for clothing and toys. All closets and cabinets have sliding doors

Julius Shulman

SAN BERNARDINO HOUSE PLANNED TO LOOK COOL

Residence for Dr. and Mrs. Max Goodman
San Bernardino, California

Richard J. Neutra
Architect

SAN BERNARDINO HOUSE

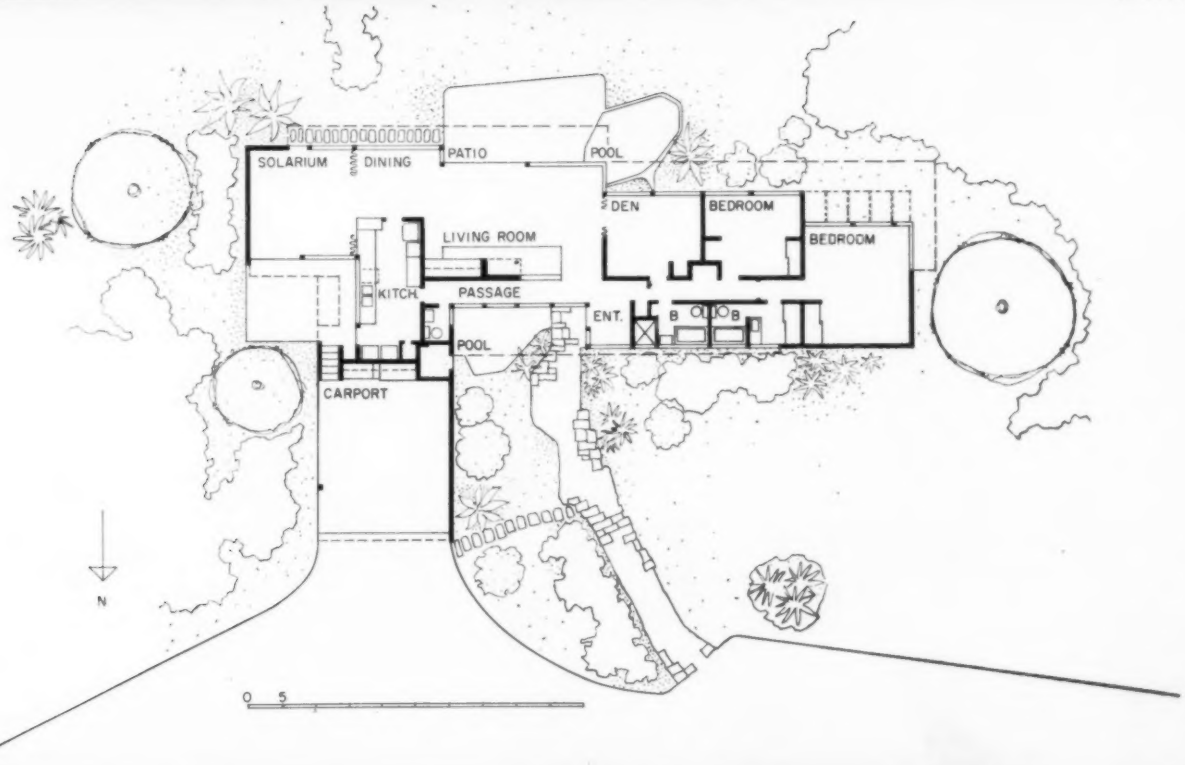
COOL SPACIOUSNESS characterizes this house in the foothills of the Sierras where the summers are very hot and dry. Living room, den, dining bay and solarium are one large open area with curtains the only partitions. The feeling of uninterrupted flow of space which results, the architect comments, "is emphasized by the pattern of pinewood ceiling that continues, through glass partitions underneath, onto the roof overhang. From the couch in the solarium one's eyes roam to the end wall of the den, an expanse of about 55 ft, and through glass along the overhang about another 30 ft more. This sensation of space in a comparatively moderately sized house of 2700 sq ft comes like a joyous surprise."

The feeling of coolness produced by such openness of plan is heightened by two shallow reflecting pools, one on either side of the house, and by the use of cool colors in the main living area (moss green carpeting, henna linen drapes, etc.)

The house occupies a quarter-acre site relatively high above the town of San Bernardino, overlooking it to the south. On the north side of a large Eucalyptus grove "forms a backdrop and hides all other houses." Construction is wood frame on concrete slab; walls are plaster with occasional redwood areas on the exterior, partial birchwood paneling on the interior.

The owners, a busy pediatrician and his wife, have two small sons who use the solarium as their indoor play area. From it a sliding door opens to the play yard, easily supervised from the kitchen and protected from the driveway by the carport.

Julius Shulman

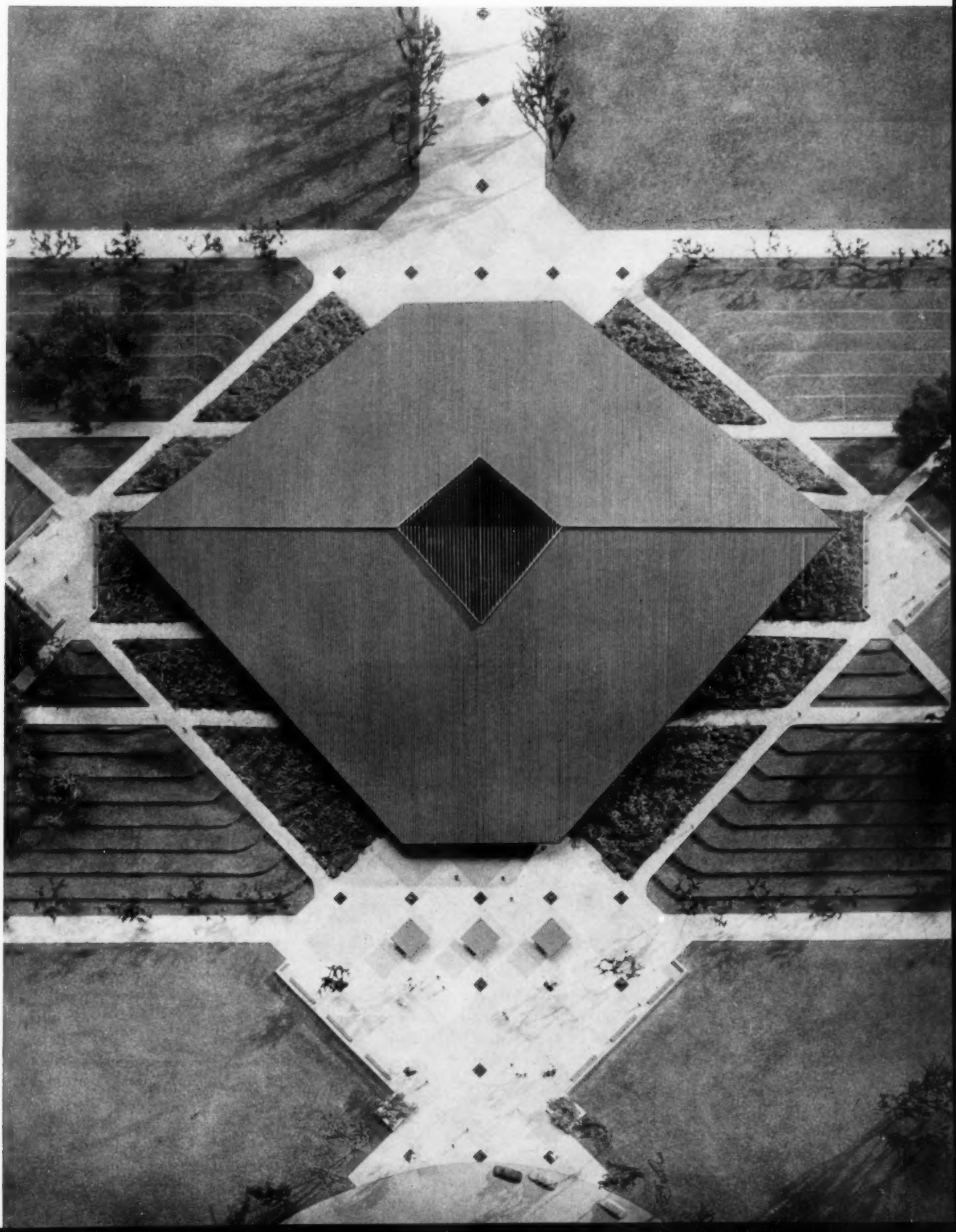


Julius Shulman

SAN BERNADINO HOUSE

Main entrance from driveway is up a winding flagstone path and past a small pool below a pergola that extends into the redwood wall of the carport. Passage from bedroom wing to kitchen has glass wall overlooking pool and is separated from living room by fireplace wall.

AN INDOOR SPORTS PAVILION FOR STANFORD



STANFORD UNIVERSITY SPORTS PAVILION

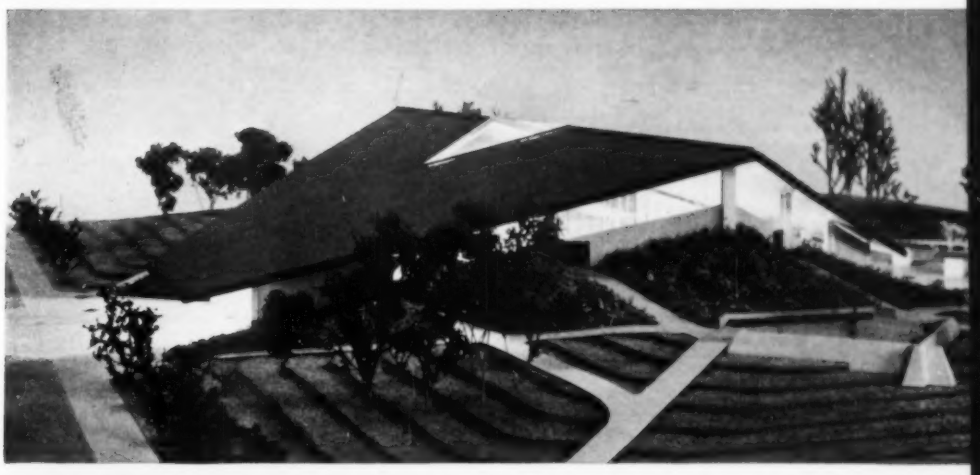
John Carl Warnecke, Architect

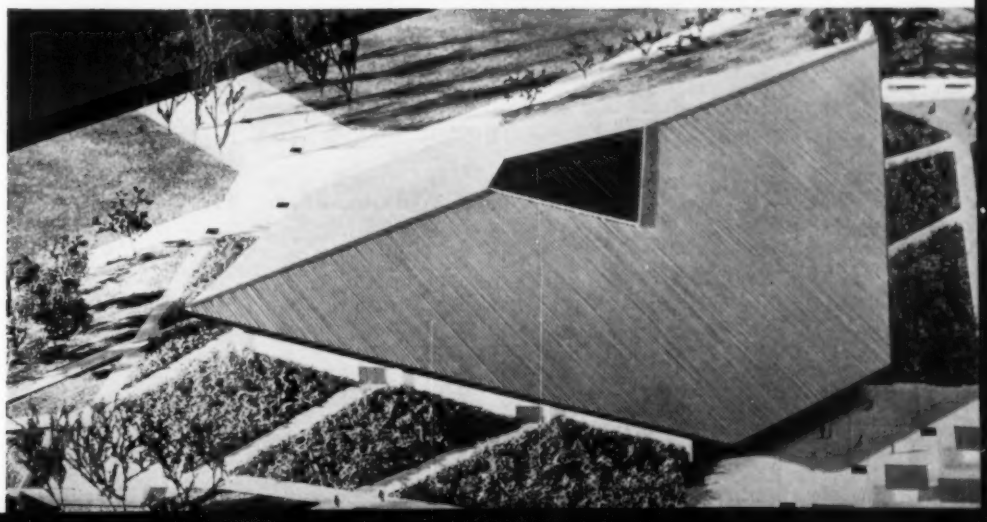
A SIMPLE SWEEPING red tile roof — chosen to harmonize with other Stanford buildings — shelters this 8000-seat pavilion for major indoor sports and university events, and provides the dominant unifying architectural element.

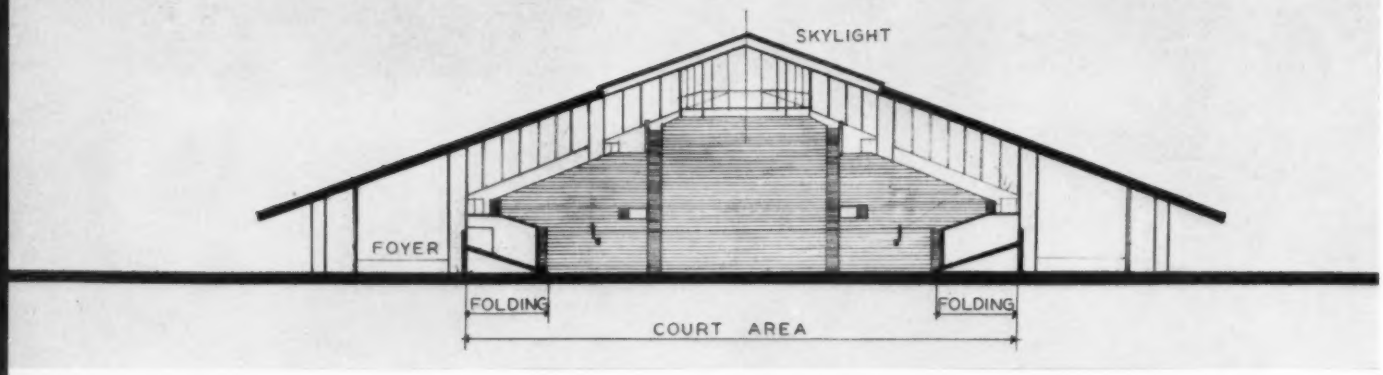
Point of departure for this program was the need for a non-interrupted playing area 110 ft by 165 ft, convertible from a single competition basketball court to three cross courts. Twenty-eight hundred folding bleacher seats permit this conversion. Organization of the space along the diagonals of the basically square plan provides the greatest depth of seating at the most desirable places and eliminates dead, inaccessible corners.

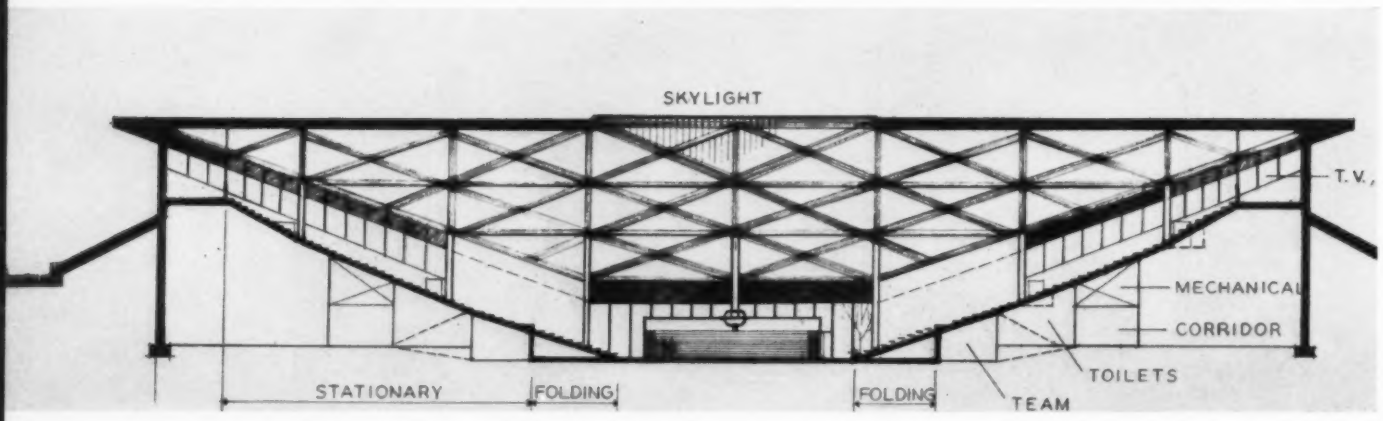
Excavated earth deposited against the building sides in slopes coinciding with the slope of the seating and with the slope of the roof, contributes an unusually strong visual unity while at the same time it provides both structural economy and easy exit-to-grade from the several seating levels.

Entrances to the pavilion are at opposite ends and are connected by a peripheral corridor which permits









STANFORD UNIVERSITY SPORTS PAVILION

direct access to the seats. The location of team and locker rooms and other adjunct facilities below the seating areas preserves the simple integrity of the single large space and makes possible its strong expression in terms harmonious with the existing campus architecture without making concessions inconsistent with the functions and structural methods of the building.

Basically, the structure consists of diagonal steel ribs whose supports are so located that they do not interfere with free vision from any of the seating areas. Exterior finish surfaces are easily maintained concrete, glass and tile.

The glazed diamond-shaped eye across the center of the roof ridge will admit a flood of diffused light into the interior during daytime use, and at night will provide an arresting accent at the center of the composition.

Taken all together, this building seems to have frankly faced the disparate requirements of its program, and has found a way of organizing its answers in a solution whose bold unity promises great satisfaction.

RADIO

FIRST UNIT OF A FOUR PART MASTER PLAN NOW FINISHED

Fellowship Hall, Trinity Church — Presbyterian Natick, Mass.

The Architects Collaborative, Architects

Bolt, Beranek E. Newman, Acoustical Consultants

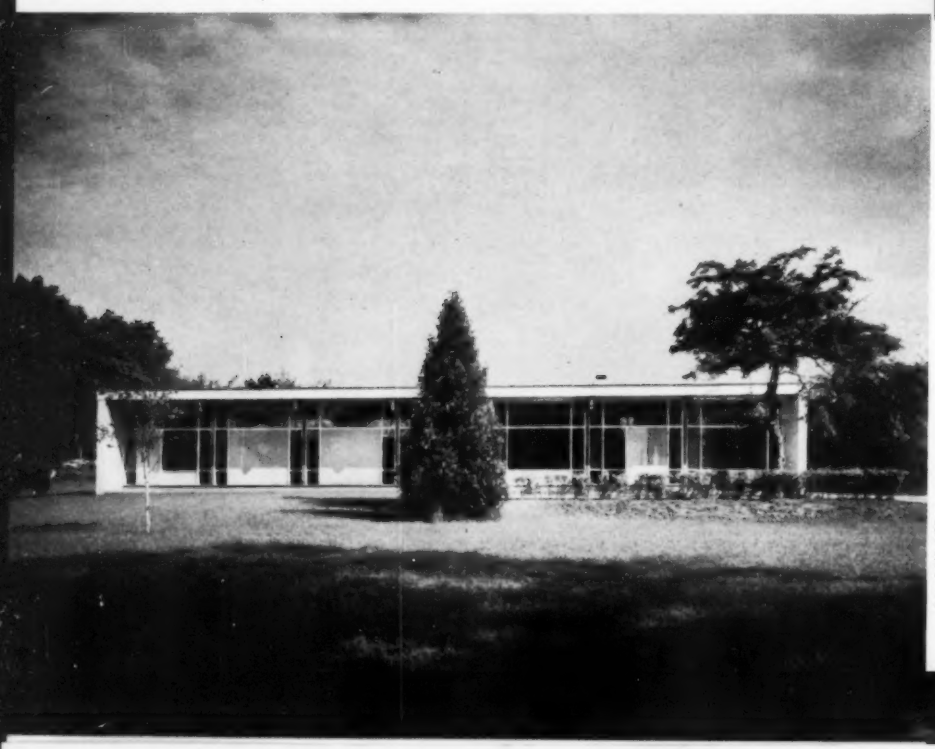
Thomas Worcester, Inc., Heating Engineers

Stanley I. Phalen, General Contractor

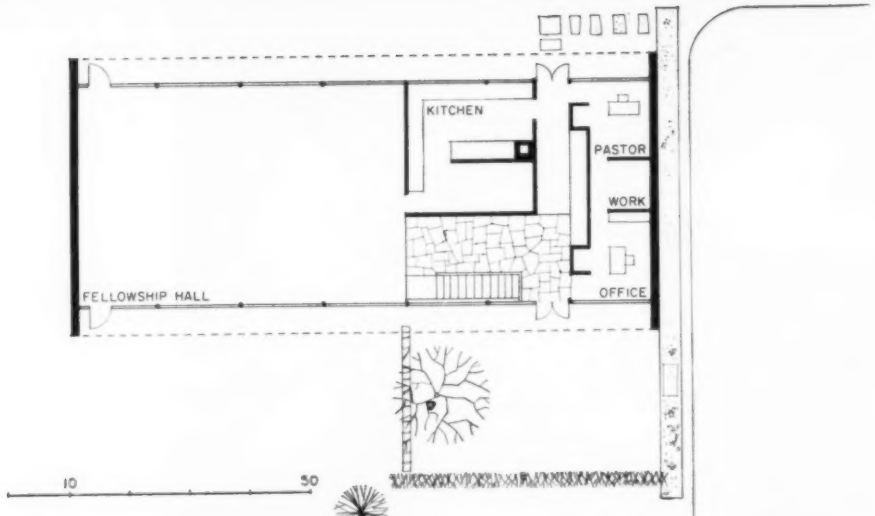
CALLED FELLOWSHIP HALL, this building is the first completed unit of a master plan for a Presbyterian center consisting of four structures joined by covered walkways. The scheme manifests a four part concept of the Church life — fellowship, education, meditation, and worship. The site is a wooded five acres near a new residential development of 1000 homes, mostly owned by young couples.

The design is a pleasingly straightforward expression of function and structure, well proportioned and carefully detailed. The simple modular plan is arranged for easy expansion endwise. Four of the 17 ft bays are devoted to a multi-purpose assembly room which seats 225. The remainder of the ground floor is turned over to the Church office, pastor's study, kitchen, etc. The assembly space will serve for worship until the church proper is built; will also be used for suppers, socials, adult study groups, etc. The full-area basement will later be finished for youth activities, community functions, scouting headquarters, etc.

The basement and above-grade walls are of concrete block finished with acrylic resin paint. Ceiling panels between the laminated girders are sand finish plaster; floors are asphalt tile. Ventilating sash are steel casements; all glazing is ¼-in. polished plate. The building is insulated by reflective type material and is heated by a forced warm-air system.



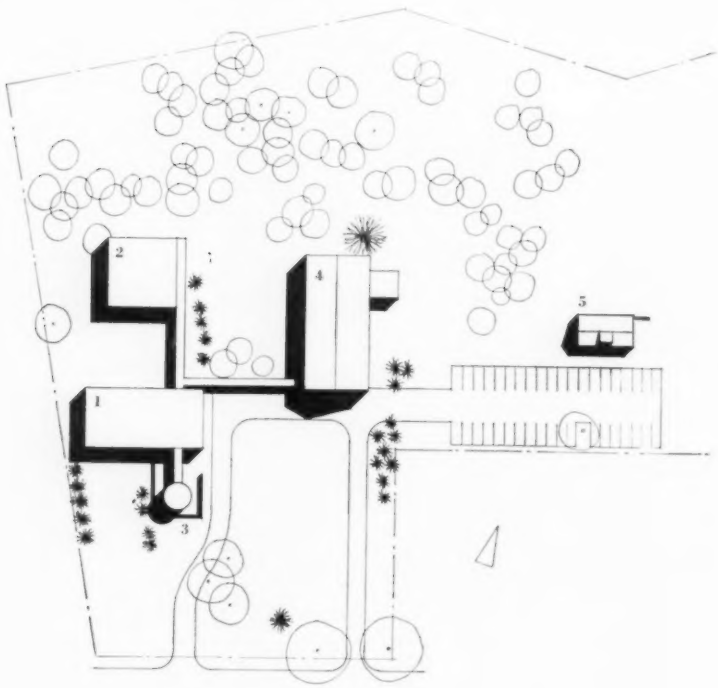
Joseph W. Molitor


KITCHEN
PASTOR
WORK
FELLOWSHIP HALL
OFFICE
10
30

FELLOWSHIP HALL, NATICK, MASS.

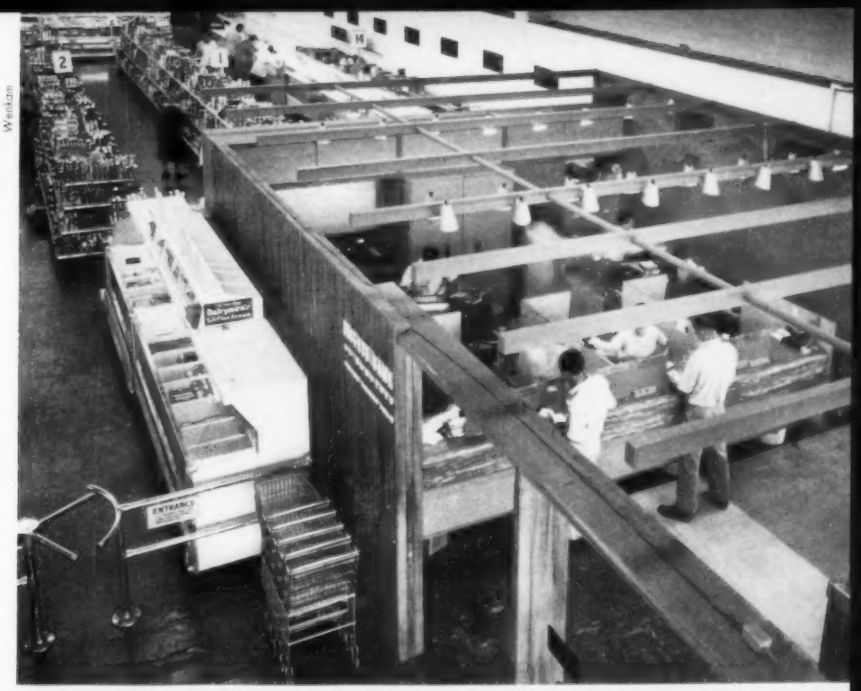
MASTER PLAN:

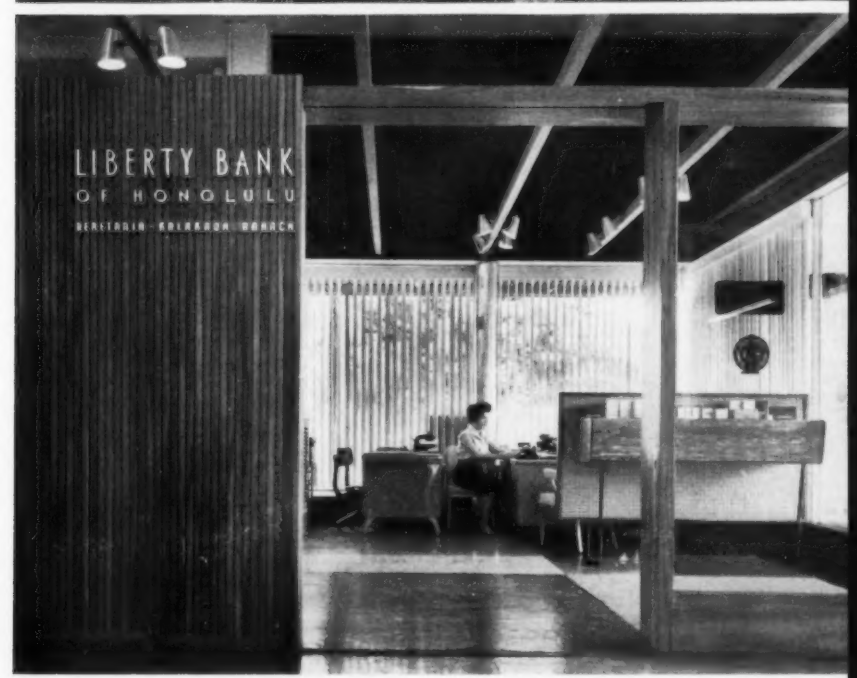
1. Fellowship
2. Education
3. Meditation
4. Worship
5. Parish House



The master plan and model photo show in physical form the four part concept of the Protestant Church life and its expression as a building group. Such a dispersion of elements offers advantages in orientation and site adaptation; offers also spatial interest.

Robert D. Harvey





SMALL BANKS AN ACTIVE TYPE

BRANCH BANK IN A SUPERMARKET

Liberty Bank of Honolulu in the Foodland Supermarket, Beretania-Kalakaua

Vladimir Ossipoff, Architect; Wayne F. Owens, Associate

ARCHITECT OSSIPOFF says, "The establishing of a branch bank in an already operating supermarket was more in the nature of a service to the community than a business venture, although the bank did want to encourage possible patronage from this particular area.

"The design problem was thus one of maintaining a certain amount of friendly dignity (in contrast to the store operation) without creating a formidable atmosphere. The small investment of $3600 has achieved its objective."

BRANCH BANK IN A LARGE SHOPPING CENTER IN

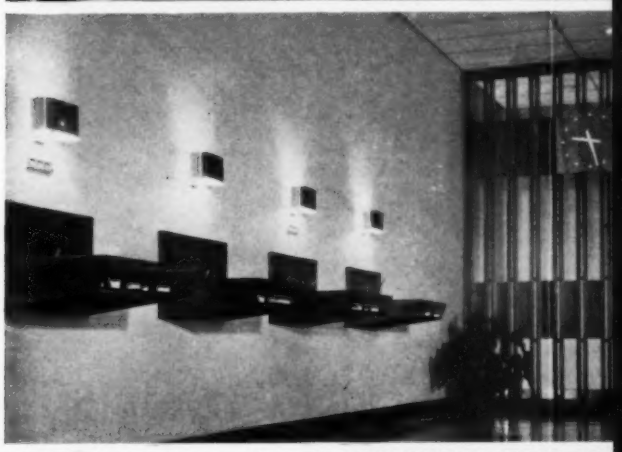
Equitable Security Trust Co., Newark, Del.

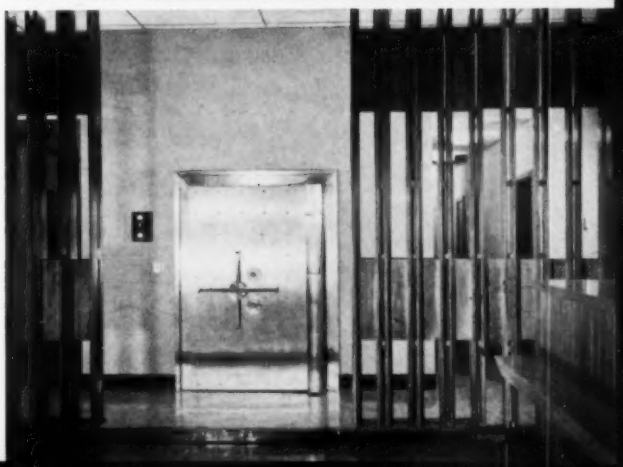
Victorine & Samuel Homsey, Architects

Redding & Co., General Contractor

CONCERNING THIS ATTRACTIVE branch office in a shopping center, Architect Sam Homsey says, "The problem was to develop a banking facility in a growing college and industrial community which would present a welcoming entrance as well as a light and cheerful interior for the customers. Our object in the design was to provide a generous, open public space and to locate officers' desks so the public would have the feeling they could be reached with ease. Since materials and colors were important in creating a cheerful effect, we used simple

Joseph W. Molitor





DELAWARE

rubber tile for the floors, colored burlap on the walls to help deaden sound, and natural walnut for the banking counter and check desks. The walnut screen at the rear — which serves to shield the coupon booths and their users — has opening sections which reveal the handsome vault door at night.

"The ceiling is finished with acoustical panels in two tones; general lighting comes from the over-all pattern of flush downlights and is supplemented by fixtures at each teller's station and check desk."

SAVINGS & LOAN ASSOCIATION BUILDING FOR A

First Federal Savings & Loan Association of Catawba County, Conover, N. C.

Clemmer & Horton, Architects;
James N. Sherrill, in charge
Robert E. Bush, Electrical Design
D. A. Rudisill, Mechanical Engineering

ESPECIALLY NOTABLE for its interior, this inviting loan office received a merit award with special commendation at the annual meeting of the North Carolina Chapter, A.I.A., at Chapel Hill in January, 1955.

Architects Clemmer & Horton say, "The client had many preconceived ideas, all conventional. However, he placed confidence in us from the beginning, and that confidence grew as sound reasons for departing from a traditional solution were presented. Now — after occupying his building — he is pleased with the result."

SMALL CITY

"Instead of the usual railing division between public and working areas, we suggested a more open, fluid arrangement in order to provide a friendly atmosphere. This idea was developed by the use of a mural, mobile, planting, placing furniture as space dividers, and by raising the tellers' screen off the floor."

All interior walls are red brick or oak; the dropped ceiling area is acoustical plaster painted dark blue-black. Floors are blue stone in public areas, cork in work areas, carpet in offices, tile in toilets.

Joseph W. Molitor

SMALL BANKS

A TWO-STORY DRIVE-IN BRANCH AND OFFICE

Chautauqua National Bank, Jamestown, N. Y.

Member of the Marine Midland Corp.

Beck and Tinkham, Architects & Engineers

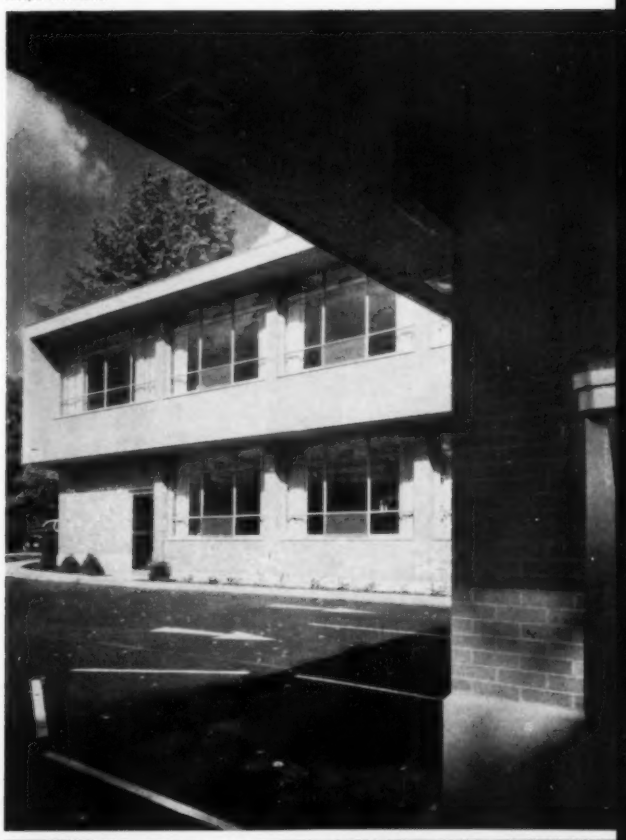
Paul B. Fleming, Mechanical Engineering

Paul C. Mehnert, Electrical Engineering

ARCHITECT ELLIS W. BECK tells us, "The design for this branch faced the two-way problem of providing space for a time-loan accounting office as well as drive-in facilities for deposits and withdrawals. Also, some off-street parking was required, in addition to a clear traffic pattern for the drive-up windows.

"The 100 by 120 plot, located on the edge of the present commercial district, was limited enough that the ground floor area of the new building had to be held to a minimum. This was accomplished by dividing the

Joseph W. Molitor



NEAR DOWNTOWN

time-loan department into two segments, with all interviewing and public contacts located on the ground floor and the accounting office on the second.

"The basement space is used for an employes' lunch room, lounge, and other social activities; also for general conferences. The south windows are shaded from the sun by extending the floor and roof slabs; the entire interior space is air conditioned.

"Although the community has been slow in adopting contemporary design, this bank has been well received."

A LARGE CITY SUBURBAN BRANCH

Manufacturers National Bank
Joy Rd. & Stahelin, Detroit

Louis G. Redstone & Allen G. Agree, Associated Architects

F. H. Martin Construction Co., General Contractor

OF THIS STRIKING open steel design, Architect Louis Redstone says, "After building several experimental auto-banks wherein drive-up windows were in separate structures connected underground, this scheme — combining walk-in and auto-teller service — was adopted.

"The placing of the building on the plot allows maximum parking, a parking entrance, and auto-teller windows which are reached by means of a driveway that permits several waiting cars to line up without interfering with city traffic in the street."

Lens-Art Photos

For Older People —

NOT SEGREGATION BUT INTEGRATION

By LEWIS MUMFORD

PROBABLY AT NO PERIOD and in no culture have the old ever been so completely rejected as in our own country, during the last generation. As their numbers have increased, their position has worsened. The breakup of the three-generation family coincided here with the curtailment of living space in the individual household; and from this physical constriction has come social destitution as well. Unwanted in the cramped small home, even when they are loved, and too often unloved because they are unwanted, the aged find their lives progressively meaningless and empty, while their days ironically lengthen. The years that have been added to their portion have come, unfortunately, at the wrong end of their lives.

Now the problem of housing the aged is only one part of the larger problem of restoring old people to a position of dignity and use, giving them opportunities to form new social ties to replace those that family dispersal and death have broken, and giving them functions and duties that draw on their precious life experience and put it to new uses. "Old age hath yet his honor and his toil," as Tennyson's Ulysses put it. The first step toward framing a sound program is, I believe, to examine the human situation as a whole, not to center attention solely upon the problems of destitution, chronic diseases, and hospital care. We shall not, perhaps, be able to care for the aged, on the scale their needs and our national wealth demand, until we are ready to put into the re-building of human communities something like the zeal, the energy, the skill, the dedication we give to the monomaniac production of motor cars and super-highways.

As things are now, the process of aging seems to go through three stages. The first, which begins around the age of forty-five, but may not be final for another twenty years, brings liberation from biological reproduction and increasing detachment from the active nurture of children within the family. For the sake of their own growth and independence, young people start at the earliest possible moment to live by themselves. Poverty or a housing shortage may prolong the two-generation family or even restore, in shaky desperation, the three generation family. But in general early marriages and early child bearing hasten the hiving off of the next generation.

Some time during this period of transition, those who have maintained a household big enough for a large family find their quarters empty but burdensome: for they are too expensive for their incomes, and even too large to keep clean, except at an extravagant cost in menial service. In cities, this leads either to a remaking of the single family house, if owned, into multiple dwellings, or to removal to a small apartment. This shrinkage of space is often accompanied by other losses, such as the breaking of neighborhood ties, the abandonment of a garden and a workshop; and that in turn brings about a further contraction of opportunities and interests. Mark the result: well before senescence has set in, even people in the upper income groups, in robust health, may find the orbit of their lives uncomfortably narrowing, in a way not adequately compensated by increased local mobility in the motor car and increased opportunities for general travel.

The second stage in senescence is that of economic retirement: withdrawal at the age of sixty-five, often enforced by benign pension provisions, from the active working life. Unfortunately our wide practice of automatic retirement often brings on a severe psychological crisis: but even if we showed greater flexibility in imposing retirement, still at some moment, early or late, this blow would fall. In addition to removing a worker from the main sphere of his life-interest and competence, it often halves his income or — as the recent Twentieth Century Fund report shows — cuts it down to a starvation level. At the same time, for those who have invested their energies too exclusively in their work, retirement tends to make their whole life seem meaningless. If at this moment, the community sharpens the crisis by weakening other social connections, too, it may psychosomatically aggravate the physical disabilities that begin to dog this period.

The final stage, that of physiological deterioration, is more variable than the cessation of reproduction or work. Whether the old are happy or bitter, active or frustrated, depends partly upon how long the period of health and vigor is in relation to that covered by the lapse of biological functions that leads to death. But also it depends partly upon how well the community's efforts are directed toward preventing minor impairments from turning, through lack of prompt and ade-

quate care, into major disasters. In any event, senescence proper brings about a gradual slowing down of the vital processes, the deterioration of bodily functions, eyesight, hearing, locomotion, fine coordinations, memory. With this goes a loss of self-help and with that, self-confidence. In the end this loss may necessitate institutional care, in a nursing home or a hospital. Since the cost of such institutional care, if prolonged over any considerable period, taxes heavily even the upper ten per cent of our income groups, every effort must be made, not merely to lengthen the period of active health, but to restore, through neighborly cooperation and friendly oversight, the kind of voluntary care that the three-generation family once made possible.

If we carry our analysis far enough, we shall find, I think, that the three phases of old age — liberation from reproduction, economic retirement, and physiological breakdown — demand a common solution. We shall also find that no present institution, certainly no simple architectural scheme, and no mere extensions of existing services, will supply that solution.

The main point I would make is that the transition from middle aged maturity to old age is a long process; and if we meet it imaginatively at the earliest period possible, instead of waiting till the last desperate moment, we can make the transition without a jar, and in some degree turn a crisis, full of cruel decisions and bitter acceptances, into a positive and fruitful phase of life. Even more, by extending active life on the upgrade we can perhaps shorten the period, now so burdensome, when it is on the downgrade. By contrast, the worst possible attitude toward old age is to regard the aged as a segregated group, who are to be removed, at a fixed point in their life course, from the presence of their families, their neighbors, and their friends, from their familiar quarters and their familiar neighborhoods, from their normal interests and responsibilities, to live in desolate idleness, relieved only by the presence of others in a similar plight. Let us ask rather by what means we can restore to the aged the love and respect that they once enjoyed in the three-generation family at its best.

Unfortunately for any such aim, specialization, mechanization, institutionalization, in a word, segregation, are the order of the present day: a meaningless, effortless, parasitic, push-button existence is now put forward as the beautiful promise of an advanced technology, indeed, the ultimate goal of our whole civilization. If those terms were actually final ones, I, for one, should hardly be concerned with the fate of the aged; for it should be plain that a whole society that can conjure up no better goals is already moving swiftly toward early euthanasia, or at least toward mass suicide. If we wish something better for ourselves, we must be prepared to put forward a program, at every phase of life, that challenges many of the dominant habits and customs of our society and moves boldly in a contrary direction.

At some point in conceiving a good habitat for the aged, we must of course come to an architectural solution; but we must not for a moment imagine that the architect himself, even when backed by ample financial resources, can provide the answers that are needed, or that beauty and order and convenience alone are sufficient. One of the most generous quarters for the aged I have seen is the old Fuggerei in Augsburg, built in the sixteenth century, composed of one-story row dwellings, giving privacy to each old couple, with a handsome fountain and a chapel. But this "city for the aged and poor" is set apart from the rest of the town; though it has beauty and order, it lacks animation; at best it is only a handsome ghetto. The objection against this solution was indignantly put to me by an old man in another comely quadrangle for the aged near Manchester: a modern building set in ample grounds looking inward on a spacious grassy close: also with a little chapel where the dead rested before burial. At first glance, the peace and beauty of this spot seemed "ideal" — but the inmates knew better. They now had, alas! only one occupation: remaining alive. When the bell tolled, it tolled not only for the departed: it ominously summoned those who were left. "All we do here," said my bitter informant, "is to wait for each other to die. And each time we ask ourselves: 'Who will be next?' What we want is a touch of life. I wish we were near the shops and the bus station where we could see things."

To normalize old age, we must restore the old to the community. In order to make clear what this means, let me assume that we have a free hand and can plan a whole neighborhood community, as one does in an urban re-development area in the United States or a New Town in Britain. If we establish the right relationships under such ideal conditions, we shall have a clearer view of what to aim for in situations where only a piecemeal solution is possible. We cannot have even a good half-loaf unless we know what ingredients should go into a whole loaf.

The first thing to be determined is the number of aged people to be accommodated in a neighborhood unit; and the answer to this, I submit, is that the normal age distribution in the community as a whole should be maintained. This means that there should be from five to eight people over sixty-five in every hundred people; so that in a neighborhood unit of, say, six hundred people there would be between thirty and

forty old people. Any large-scale organization of habitations for the aged, which upsets this proportion, should be avoided. And this brings us to the second requirement. For both companionship and easier nursing care, the aged should not be scattered in single rooms or apartments through the whole community; but neither should they be thrown together in one large barracks labelled by the architecture, if not the signboard, Old Peoples' Home. They should rather be grouped in small units of from six to perhaps a dozen apartments. The old monastic rule, that one needs a dozen members to form a community, has had long enough trial to give one confidence in it as a rough measure: when there are less than a dozen, a single cantankerous individual may have a disruptive effect. When there are too many together, they bring on institutional regulations. As an old Navy man once pertinently remarked: There is freedom on a destroyer but not on a battleship.

But once a reasonable degree of closeness is established between small groups of the aged, there is much to be gained by giving them apartments on the lower floors of two- or three-story houses whose upper floors will be occupied by childless people in other age groups: there is likewise reason for providing a covered way or arcade, to make visiting back and forth easier in inclement weather, and to serve as a sheltered place for chatting and sunning at other times. This mixing of age groups within a housing unit primarily designed for the accommodation of the aged would make it possible for those past sixty-five, who found stairs difficult, or who wanted to be more accessible, to adapt themselves to their infirmities with no greater hiatus than moving downstairs.

Now it happens that the number of people over sixty-five in a community are roughly the equivalent of the number of children under six or seven; and in meeting the needs of both extremes pretty much the same conditions hold. Young children need special protection and bodily care; they must be guarded from wheeled vehicles; their difficulties in locomotion and coordination when under three make it desirable to avoid unnecessary obstacles and long flights of stairs. Even psychologically, there are parallels between the self-absorption of the young child and the tendency to withdrawal and inner concentration that mark the last phase of senescence. In a well-designed neighborhood unit, the aged should be able to go to any part of it, including the shopping area, the library, the church, the community center, without crossing a traffic artery; indeed, without if possible climbing a step. Someday, when our motor car production is designed to fill varied human needs, rather than the requirements of the assembly line, we will produce electrically-powered rolling chairs for the aged, which can go safely anywhere a pedestrian can go. That will lessen one of the serious handicaps of old age, if medical remedies for arthritis and feeble limbs remain ineffective. But until then, the ambit of the five-year-old child and the seventy-five-year old senescent is their normal walking

distance. Once these conditions are fulfilled in a neighborhood unit, a larger life would begin to open before the aged.

Now we are ready to re-build, in our ideal scheme, the other facilities and activities and services that were once performed, more or less effectively, by the three-generation family. And just as the young proceed with their growth through multiplying their contact with the environment and enlarging their encounters with people other than their families, so the aged may slow down the processes of deterioration, overcoming their loneliness and their sense of not being wanted, by finding within their neighborhood a fresh field for their activities.

But before such an environment can be created, we must challenge the whole theory of segregation upon which so many American communities, not least those that call themselves "progressive," have been zoned: zoned so that one-family houses and apartment houses, or row houses and free-standing houses, cannot be built side by side; zoned so strictly for residence that in many suburban communities one cannot buy a loaf of bread or a tin of tobacco without going a mile or two by car or bus to the shops. The pernicious effect of this kind of zoning was first adequately characterized by the Committee on Community Planning of the A.I.A. as far back as 1924, and time has abundantly proved all their contentions. Under our zoning ordinances, it is impossible to give either the young or the old the kind of occupational and environmental variety that both a superblock and neighborhood unit should have.

In a mixed community, however, many opportunities for service, both voluntary and paid, would open to the aged. Gardening is an occupation that can be carried on at odd hours, and that can be adapted to the strength and staying power of the old: when a community is well planned, with sufficient amount of parked and gardened open space, it makes greater demands for collective care than it can now often afford. Certainly old people with a turn for gardening should have a little garden plot of their own, too, to look after. Similarly other opportunities for handicraft should be met by the provision of workshop facilities; making toys, repairing mechanical fixtures, binding books, painting furniture would not merely provide older people with new forms of work: it would, even more importantly, give them the human contacts that a more restricted life fails to offer. Such little shops

would have a further educational value for the younger members of the community: indeed, they might be incorporated, with a separate entrance from outside, in a modern school, with great advantage to both the old and the young, who now too often miss the precious experience of intercourse with their grandparents' generation. I know a small town where the carpenter's shop, situated in the old residential area, is the place where school children come to get little repair jobs done; and their contact with the carpenter himself is an affectionate and rewarding one. Such a program would be far more efficacious, psychologically speaking, than merely putting the aged to work on some monotonous specialized task, producing in quantity for the market, under factory conditions.

In addition there are other services that the aged can perform only in a mixed community, beginning with their most obvious service as baby-sitters. This again, at a dollar an hour, has become a prohibitive luxury even in middle class communities; and the hazards of leaving the young to the sometimes irresponsible care, if not criminal levity, of inexperienced adolescents only underline the desirability of enlisting the old in the same fashion as they would have been used in the three-generation family. In addition, there are many experienced old women, proud of their skill at baking a cake, or even cooking a whole dinner, who would think better of themselves and their life if they might cook and bake occasionally for pay. By having such opportunities, old age pensions and annuities might be made to go a little farther, with greater happiness for both the server and the served. To cause the aged to spend all their time glued to a television set is to damn them prematurely to a second childhood. Though these passive amusements have their place in the life of the aged, especially for the crippled and bedridden, there is little reason for reducing their lives as a whole to such a soporific routine. What the aged need is activities: not just hobbies, but the normal participation in the activities of a mixed community.

No single institution, however amply financed and humanely planned, could provide anything like the range of interests that a mixed neighborhood community would do, once age ceases to be regarded as a disease, best treated in an isolation ward. Still there usually comes a time in everyone's life sooner or later when he requires specialized nursing and medical care. The skillful organization of such care is the duty of the community as a whole; but some fatal inertia has kept our hospital services in an antiquated centralized pattern, and has prevented the creation of small nursing homes, close at hand for family and neighborly visitors, who could, if the hospital were conveniently at hand, take over no small part of the otherwise prohibitively expensive nursing service.

Even before active hospitalization there is need for a public organization of visiting nurses and visiting houseworkers, such as are now provided for on a national scale in England and likewise in certain individual American cities. Here again, by drawing upon all the resources of the community, a much more favorable situation can be created than the most elaborately equipped central institution can provide. I look forward to a day when a small nursing home, for illness and for maternity cases, will be part of the normal requirement of a neighborhood: perhaps as a direct adjunct to a medical clinic and a visiting nurse service. Only when these normal functions of the family are drawn back into the circle of the neighborhood community is there any prospect of our catching up with our needs without raising to a prohibitive height the present cost of institutional care.

Now we can put together these requirements for the aged. They should, first of all, be part of a normal mixed community, whether they become members of it at twenty-five or at seventy-five. Their quarters should be undistinguishable outwardly from those of other age groups; but they should be sited, as far as possible, where there is a constant play of diverting activity, near a shopping center or a school, so that their chance of being visited, casually and effortlessly, will be increased. Frequent visits, though short, are more refreshing than formal visits, tediously prolonged, that leave desolate intervals of loneliness between them. Many people would find their own family life replenished if the grandparents, though not under their feet, were near at hand; and above all, the young would be the gainers from this; for there are special bonds of sympathy between them and their grandparents' generation, through its very detachment, which often makes them far more ready to heed their advice than that of their own parents. Who can say how much delinquency and brutalized mischief in our American towns may not be due to the very absence of a warm, loving, reciprocal intercourse between the three generations?

Through their nearness to each other, in small units, personal contacts within their own group may easily pass beyond the pleasantries of daily intercourse, the hospitalities of a cup of coffee in the afternoon or a friendly game of cards or checkers or chess at night; it would also involve visiting each other when ill and performing little services for each other. Everything that makes the aged more independent, yet more confident of the fact that their presence is welcome, increases their capacity to love and be loved; and it is only, in the end, by providing an environment in which the gifts of love may be more easily interchanged, that old age can be kept from shrinking and drying till what is left of life is only a dismal waste. But to say this is also to say that there is no easy shortcut to improved care of the aged: to do well by them, we must give a new direction to the life of the whole community. If we fail here, we shall, in prolonging life, only prolong the possibilities of alienation, futility, and misery.

BUILDINGS FOR THE AGING

ARCHITECTURAL RECORD

BUILDING TYPES STUDY

NUMBER **234**

Announcing

ARCHITECTURAL COMPETITION

THE NATIONAL COMMITTEE ON THE AGING of the National Social Welfare Assembly announces an open Architectural Competition for a Home for the Aged to include an infirmary and rehabilitation facilities. Administrative costs and prizes are provided through a grant from the Frederick and Amelia Schimper Foundation. The competition is being conducted in cooperation with ARCHITECTURAL RECORD and *The Modern Hospital.*

The purpose of the competition is to stimulate imaginative planning for a type of building rapidly increasing in volume and importance but relatively new to architects, and about which there is practically no reference material in the literature of architecture. If new buildings are to be truly functional, architects and those responsible for the care of the aged need to understand more clearly an emerging positive philosophy about old age as well as the current scientific, social, and economic trends, which affect the lives of older people.

The competition is an extension of four years of work by the National Committee on the Aging in improving standards of institutional care for the aged. Previous efforts have produced a series of three books entitled "Standards of Care for Older People in Institutions."

Chairman of the jury is Pietro Belluschi, Dean of the School of Architecture and Planning of the Massachusetts Institute of Technology. Other members are: Richard J. Adams, Architect, Montgomery, Ala.; Ollie A. Randall; Charles F. Wilinsky, M.D., Hospital Consultant, of Boston; William Wilson Wurster, Dean of the School of Architecture of the University of California.

The Professional Advisor is I. S. Loewenberg—Loewenberg & Loewenberg, 111 West Monroe Street, Chicago 3, Ill. Edward H. Noakes is Consulting Architect.

The competition was planned with the help of an advisory committee:

Michael M. Dacso, M.D., Director
Physical Medicine & Rehabilitation
Goldwater Memorial Hospital

John J. Egan, President
Hospital Industries' Association

Emerson Goble, Managing Editor
ARCHITECTURAL RECORD

Frank S. Groner, Administrator
Baptist Memorial Hospital

Everett W. Jones, Vice President
The Modern Hospital Publishing Co.

Walter A. Taylor, Director
Department of Education & Research
American Institute of Architects

Wilbur Henry Tusler
Magney, Tusler & Setter,
Architects & Engineers, Minneapolis
(Chairman, Committee on Hospitalization & Public Health, American Institute of Architects)

I. S. Loewenberg, Architect
Loewenberg & Loewenberg, Chicago

Edward H. Noakes, Architect
White, Noakes & Neubauer
Washington, D. C.

Ollie A. Randall, Vice Chairman
National Committee on the Aging

Dean W. Roberts, M.D., Director
Commission on Chronic Illness

August Hoenack, Chief, Architectural & Engineering Branch, Division of Hospital & Medical Facilities, Public Health Service

Clifford Wolfe, Secretary
Council on Hospital Planning & Plant Operation
American Hospital Association

Joseph Douglas Weiss
Architect, New York City

Some Current Attempts at
BETTER BUILDINGS FOR THE AGING

By Geneva Mathiasen
Secretary, National Committee on the Aging
National Social Welfare Assembly, Inc.

SOMETHING TO DO, and a place to live" — these are the two great needs that time puts upon all those who live into old age. At present, any older person who finds in his community the means of satisfying either of these needs is lucky. It is a safe guess that during the last half of this century, there will be no community in which the needs of the elderly are not reckoned with in a fair share of the building which is done. Not only will dwelling units be affected: steep flights of steps to church auditoriums will be eliminated; curb stones at street corners will be replaced by gently sloping ramps; grab bars may well become standard equipment in all public toilets; shops will provide places for customers to be seated while examining merchandise and alcoves for rest and possibly refreshments on every floor. The needs of older people in the community must be in the minds of architects and planners in relation to public buildings as well as private dwelling units.

Numbers and Current Housing Status. The number of people 65 and over in this country is increasing every day. At present, about one person out of every twelve is 65 or over; by 1975 the proportion will be one out of every ten. By 1960 there will be nearly 16 million people in this age group. How many of these will want or need new housing, no one can say. However, 1950 Housing census data revealed that nearly 30 per cent of the dwellings owned by this age group were sub-standard and 43 per cent of those rented were sub-standard. On the other hand, 30 per cent of the dwellings owned by those 65 or over had a value of $10,000 or more.

These houses of higher value, however, are not necessarily suited to the needs of older people. Twenty per cent have seven rooms or more, and are often relics of a former day when families were larger, land and building costs lower, and large houses in vogue.

Probably the most striking feature of the housing census so far as older people are concerned, is the large number — nearly two thirds — who own their own homes. While the home often represents lifetime savings, it is not only a financial but an emotional asset. Many older people will go without food, fire, clothing, or medical care even to the extent of health impairment in order to keep their house. Since the necessity to relinquish it is usually brought about by illness, death of a spouse, or sharply reduced income, there is apt to be double trauma. Therefore, pre-retirement counseling by industry or the community suggests planning at an earlier age for the kind of housing needed for the later years and making a move, whenever the family is grown and less space is required. Since the need for a smaller space is characteristic of very young as well as older families, there is a much larger potential market for the small house than is currently realized. Also, since many of the architectural features essential to the health and safety of older people are also convenient for younger people, the same type of housing may be suitable for both young and elderly families.

Geographical Distribution. Contrary to popular opinion, the aged are not concentrated in a few states with equable climates. The New England and mid-western states have a higher proportion of their population over 65 than do Florida and California. Furthermore, most elderly people prefer to remain in their own communities. The movement of younger people to the suburbs often leaves older people in the inner city of the metropolitan area, usually in sub-standard housing which tends to perpetuate slums. The high percentage of older people and their housing needs affects every state and community, though the specific needs may vary with the local population.

Family Size and Sex. The most significant fact is the large number of single people the majority of whom are women. Only about 44 per cent of those 65 and over in 1950 were married and living with a spouse. The rest of the aged — nearly three out of five — have no husband and wife households. More than half the women in this age group are widowed, and about one fourth of the men. While the older population in 1900 was about equally divided among men and women, in 1950 there were 90 older men per 100 women, and by 1975 estimates are that the ratio will be about 72 men per 100 women. This tendency points to an increasing number of unattached elderly women who will need living accommodations suited to their circumstances.

Financial Status. There is a tendency to equate age with low income. In 1950, nearly two thirds of all aged men had annual incomes under $2000. On the other hand, aged men received ten per cent of all incomes between $15,000 and $25,000, and 18 per cent of all incomes of $25,000 and over. While there is a great problem of providing good housing for older people at a price they can afford, there is a market for housing in a wide range of income groups. Furthermore, the income status of older people in the future will be greatly changed for the better with increases in Social Security benefits and the growth of industrial pensions.

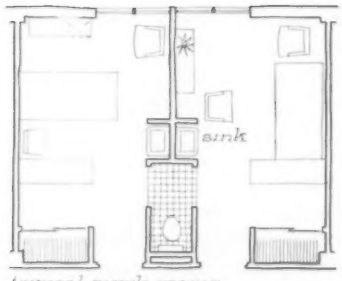
Health. The National Health Survey showed that "On any given day, one in every seven men and women

GOOD SAMARITAN HOME FOR THE AGED

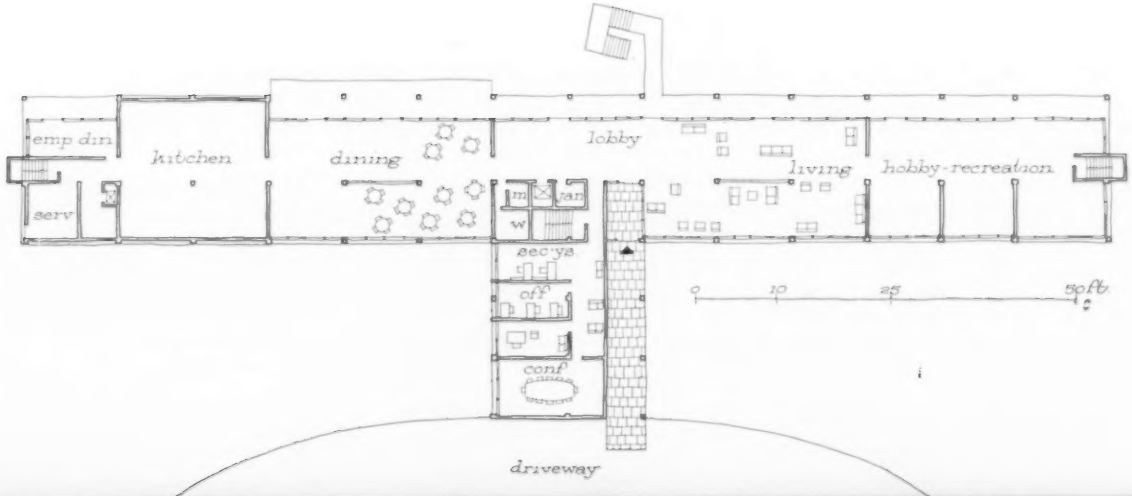
St. Louis, Mo.

W. P. Manske; and
Hellmuth, Obata & Kassabaum, Architects

Now in final design stage, this building for the Evangelical and Reformed Church is to be located on a bluff overlooking the Mississippi. Due to a slope in the site, main entrance, living and dining rooms and the like will be on the second of four floors, bedrooms on the first, third and fourth. The fourth will also house extensive medical facilities and infirmary section. As now planned, the infirmary will have 25 beds, in a building to house 150. Each floor will have its own lounge area, sun room, sewing room and snack kitchen. Most of the residents will be in single rooms, each having private lavatory and sharing a toilet with the next room.



typical single rooms



aged 65 and over is disabled, and four out of seven of these (8 per cent of all aged persons) are disabled because of major chronic diseases or impairments." In a survey of the retired population of St. Petersburg, 36 per cent of the group said they had one or more chronic illnesses. However, nearly 62 per cent had not visited a doctor during the preceding six months, and less than 5 per cent had required nursing care during that time. At this point, it is important to take note of the tendency to speak of "older people," meaning those over 65, as if they were all similar in physical characteristics and needs. Individual differences, however, tend to increase, not decrease with age.

Dr. J. H. Sheldon, eminent British physician and President of the International Association for Gerontology, points out that old age can be most accurately measured in relation to the degree of independence retained, and in this sense "age" is more apt to affect the individual at 75 than 60. After 75, the infirmities of age are more frequent. Many more people live in institutions at that age or in the homes of relatives. This fact is of supreme importance in relation to housing, for architectural features alone may often mean the difference between independent and institutional living, — and it influences profoundly the kind of health facilities needed in a Home for the Aged.

New Developments in Housing the Aged

Suitable housing for older people is scarce, and even serious consideration of the need is very recent. In the past few years, there has been a great deal of talk and some experimentation. Every community that has surveyed the needs of its older people has placed high priority on housing. Actual experience, however, is spotty and widely scattered. The following examples may indicate trends and suggest further developments:

The Individual House for the Older Person. Many older people desire a small house situated like any other house in a normal community. Few of these have so far been built, in part at least, because of the difficulty of favorable financing for a one-bedroom house. There has been a strong belief that such houses have small resale value. Further experience, however, may well prove the falseness of this assumption. There is some experience in having such a small independent unit attached to the house of an adult child or other relative, the so-called "mother-in-law house." Proposals have been made, also, for duplex lifetime houses. One unit would be the small one-bedroom house for the early and late years; the other a three or four bedroom unit for the period of family life. At all times the unit not in use would be available for rental and provide income.

The Retirement Village. The typical retirement town is a planned community of 500–1000 housing units to provide living accommodations for retired people. In their simplest forms these are real estate developments containing small individual houses designed for sale, with a small down payment and monthly payments within retirement income. Often, though not always, they are several miles from a town of any size.

Some such communities make provision for grocery stores, drug stores, laundromats, etc. As these developments increase in number and competition becomes keener, other inducements are added. Some offer possibilities of employment in the shops, on the grounds, or in some light industry which may be established. Some offer to provide outdoor recreation areas and central buildings for working at hobbies or crafts.

Since current promotional efforts now indicate considerable building of this type, some observations about its desirability from the power of view of the older person and the promoter may be desirable.

With some exceptions, the houses are planned with the needs of older persons in mind only in relation to size of family and retirement income. They are small and low cost. One brochure advertises 1½ room houses, measuring 13 by 20 ft, for single people for rent at $22.50 monthly; 2½ room houses for couples, 16 by 26 ft, at $30.00 monthly. The brochure of a typical development for sales offers a two-bedroom house with carport for $7000, a down payment of $295, and monthly payments of $55.

There is real question about the desirability of isolating older people from the rest of the community. There are obviously those who find no objection to this arrangement, since the houses are sold in considerable numbers. However, so far there has been too little housing available to older people to allow for much choice. Also, most of these developments are new, and their ultimate success cannot yet be judged. Most of these houses are purchased new during the early years of retirement when a couple is in fairly good health, able to maintain house and grounds, have a car in good repair, and a retirement income sufficient to provide for necessities. Ten years later the situation may be quite different.

There is also the question as to whether these communities will continue to be popular as the original population inevitably grows older.

There is seldom any provision for increased health and hospital facilities either within the retirement village itself or the neighboring community commensurate with the potential health needs of so many older people. Those who promote these developments are apt to stress the health-giving qualities of the climate and care-free retirement life and resent any suggestion of the need to consider clinic and hospital needs.

The president of a real estate company which has built a retirement community of 800 families feels that too much emphasis is placed on health problems of older people. His experience "having housed aging people for the past four years" indicates, he says, that the need for doctors and hospitals is "no more than normal, and perhaps very much less."

Four years is not long enough to test the ultimate need. While it is true that medical achievements have enabled people to reach the later years with better health than formerly, and it is hoped this situation will continue to improve, it is not sound to plan long-range housing arrangements for the elderly without consideration of the health factor.

SALHAVEN: RETIREMENT VILLAGE FOR UPHOLSTERERS

Rufus Nims, Architect

Now under construction near Jupiter, Florida, this scheme of the Upholsterers' International Union has been and will be much studied. It represents a new concept of the retirement village idea, complete with houses, apartments, hospital, crafts shops, stores, and a great variety of recreational and therapy facilities. There will also be a comprehensive program of adult education, and the concept points to maximum activities for retired (or convalescent) workers. If old people accept the idea of segregated life, Salhaven looks to be a fine place for it. At least it will provide a lively test for the thought that old people should have their own town planned almost exclusively for their own needs.

PROPOSED INSTITUTION FOR THE CHRONIC SICK AND AGED

For West Orange, N. J. Kelly & Gruzen, Architect — Engineers

Proposed for construction by the Jewish Community Foundation, this project calls for 250 beds, ancillary services, diagnostic and treatment facilities, administration, recreation, lounges as a self-contained home for the aged. Medical affiliation with large city hospitals is proposed.

Salhaven, a community for retired members of the Upholsterers' Union at Jupiter, Florida, has recognized the significance of the health program by appointing a medical director and supervisor of nursing services before the project is opened, and making the convalescent hospital the first building to be erected. Cottages and lodges, designed for safety, comfort, and beauty will be available on a rental basis to retired members of this Union. There will be a central dining room for the residents of the lodges and any others who care to use it.

There will be a library and an adult education program offering opportunities for studying art, literature, history, philosophy, languages, current events, crafts and any other subject for which there is demand.

There will also be an upholstering shop where those who desire can work and add to their retirement income. It will be interesting to learn whether the advantages of this community will compensate for the lack of variation in both age and occupational interest to be found in a normal living situation.

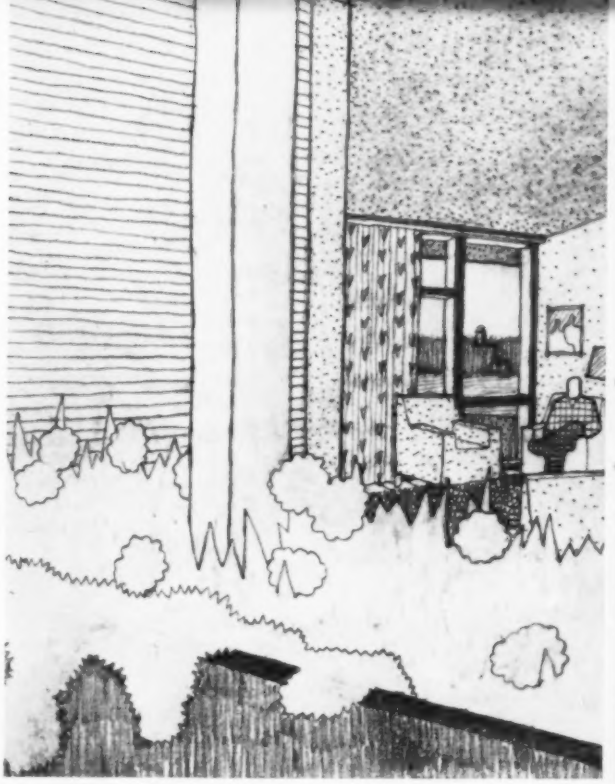
Small Single Housing Units Within the Larger Community. Cobbs Hill Village in Rochester, New York, is composed of 27 motel-type structures of one story, 21 of which are one-bedroom, five two-bedroom, and one a studio or efficiency. The Rochester Management Company operates them on a non-profit basis. A recreation room is provided and the services of a visiting nurse.

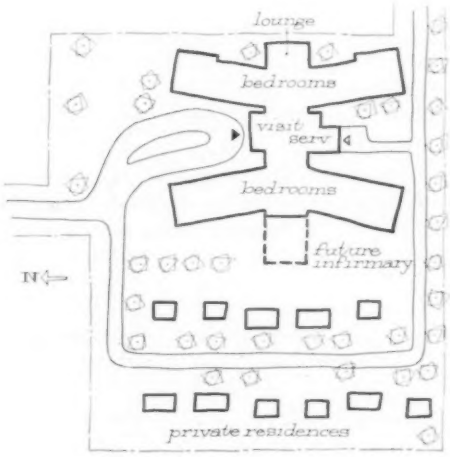
The Housing Project of Senior Center, Santa Barbara, California consists of 14 small houses adjacent to a Senior Center. It was built and is operated by the American Women's Voluntary Services to meet the needs of older people whose very small incomes made suitable housing unobtainable. Each housing unit has a sitting-room, bedroom, kitchen, bath, and paved porch.

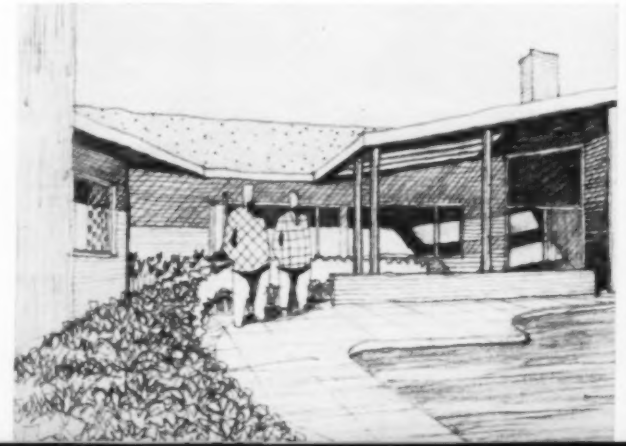
The Senior Center, which is open to the entire community, includes besides its large central room a kitchen, an enclosed patio, a laundry for the use of the residents, and a complete apartment for the hostess in charge of the Center.

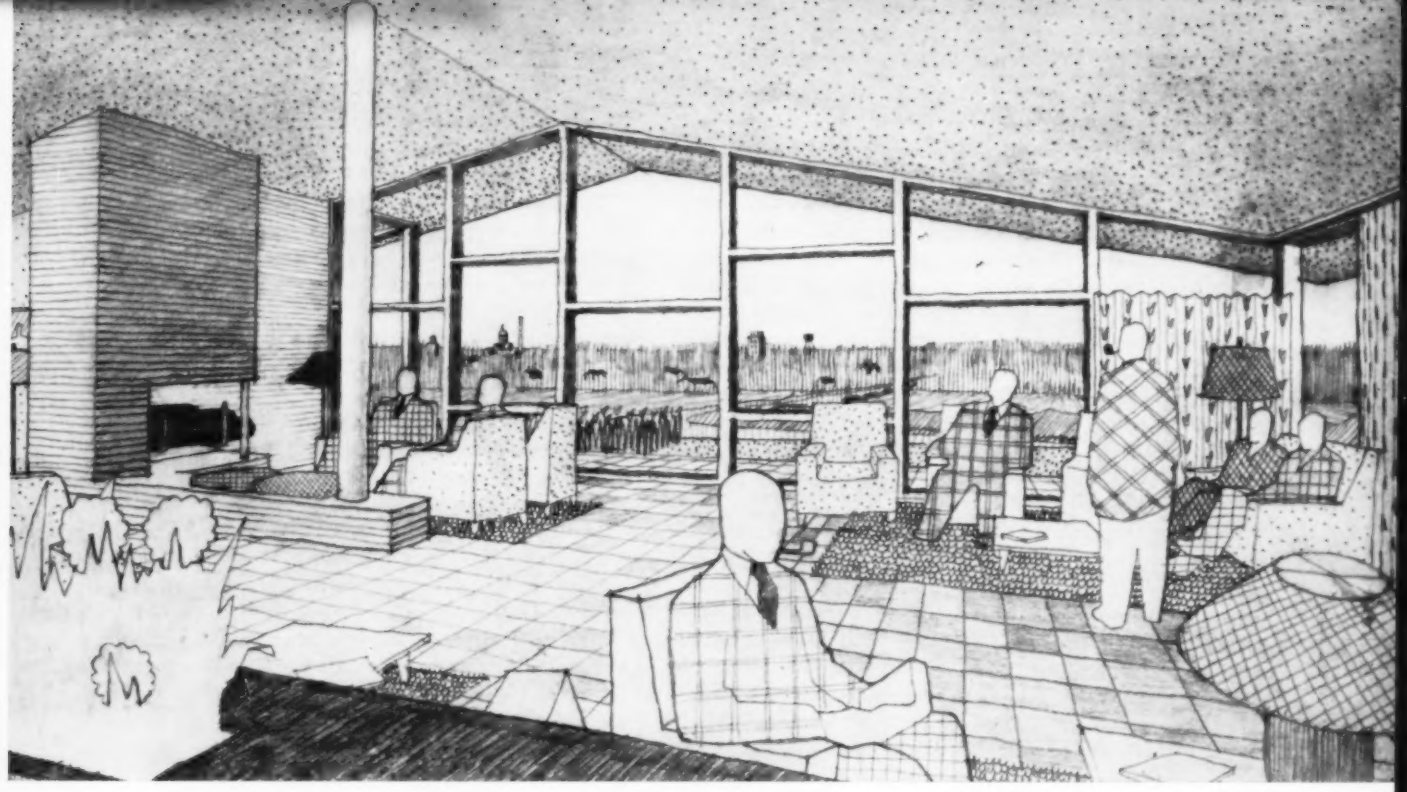
The American Women's Voluntary Services has acquired land and plans to build 11 additional units. The cost of the new units is estimated at $5000. The group has hoped to demonstrate that low cost housing for older people can be privately financed if investors are willing to accept a modest rate of interest on the investment.

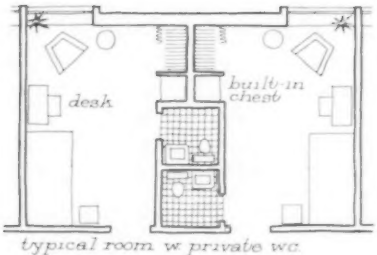
Apartment Houses. The first apartment house for older people in this country was Tompkins Square House erected in 1929, through the gift of a donor, and is operated by the Community Service Society of New York on a non-profit basis. It is an elevator apartment house for elderly men, women, and couples of limited income who are physically able to care for themselves and participate in the life of the community. There are 44 single rooms and 8 two-bedroom apartments furnished or unfurnished, with cooking and refrigeration facilities. The bath is shared with two or three others. There is a non-profit cafeteria which each resident is required to patronize to the extent of $15 per month to









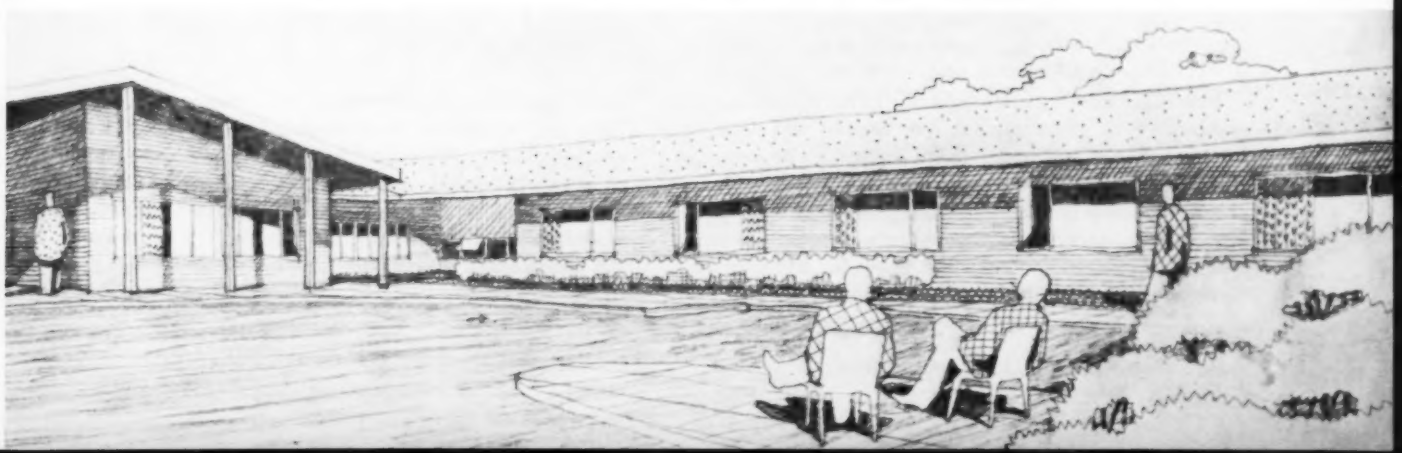


typical room w private wc

SUNSET HOME, WINDOM, MINNESOTA

Thorshov & Cerny, Inc., Architects

It has frequently been said that a home for the aged needs, perhaps more than most buildings, the sparkle of progressive thinking in design, for its residents should not be looking backward, but forward. Here is a new home that obviously takes this view. It was planned primarily for residential purposes, with a mixture of one-bedroom cottages and hotel-type rooms in the main building. There is very little in first-stage plans for health facilities, but the floor plan shows nurses' stations so that nursing service can be instituted in any part of the building, and a special infirmary wing is planned for the future.



assure its operation. Also provided are a living room and a lobby on the ground floor, a roof garden, and a fully equipped laundry available to all residents.

The resident director is a registered nurse, who, with the assistant director, provides supervision of the house and residents. When illness requires bedside care, arrangements are made for hospitalization or nursing home care. Periodic cleaning of individual rooms is provided. Otherwise, residents care for their own rooms.

The neighborhood provides easy access to churches, libraries, parks, and shopping facilities. The rental figures are such that recipients of Old Age Assistance may live there comfortably. Although the building was originally provided free of cost and is tax exempt, the operation requires a subsidy.

In Omaha, a group of teachers made the first application for a cooperative apartment house under Section 213 of the National Housing Act, in 1949. Three years ago plans were started for another building for the retired teachers whose incomes are small. Present plans call for 156 apartments. There will be twelve individual units and two common sitting rooms on each floor. There will also be a large lounge, craft shop, and laundry. Meals will be provided as a part of the service and it is estimated that the entire cost will average approximately $120 per month, including food.

The group plans to work out a recreational and cultural program based on the interests and needs of the residents.

Semi-Institutional Housing. There seems to be developing a new "twilight zone" in housing for older people which takes into account both the desire for independence and the potential need, particularly in the late 70's and 80's, of increasing amounts of protective and health care. These new plans call for a sort of "campus plan," with facilities for a wide range of living arrangements — from cottages or other independent housekeeping units to an infirmary. The plan allows residents to transfer from one type of facility to another as their changing situation may suggest. Many of these developments are now being undertaken by national, religious, and fraternal groups who formerly limited their facilities to institutional care.

"Presbyterian Village," near Detroit, is typical of many similar projects. Presbyterian Village is just northwest of Detroit on a 38-acre site that is half wooded and half cleared. The site is surrounded by residential areas, a grade school and a golf course. Public transportation is readily accessible to the site, providing transportation into Detroit and the surrounding communities.

A planning committee kept in mind that various kinds of facilities were required to best serve the needs of the aged in their different changes of status and their varying economic states.

A similar development, Willamette View Manor, was recently opened near Portland, Oregon, under the auspices of the Methodist Church, based on experience with Pacific Homes in California.

The Congregational Church has a similar type of development within walking distance of the shopping center of Claremont, California. The community consists of residence halls with small apartments for single men and women and of small homes which are owned by their residents or by Pilgram Place. In addition, grounds contain infirmary and nursing home.

The Lutheran Church plans a Retirement Center in DeLand, Florida. Plans call for a central unit with kitchen, dining, and living room connected by covered walks with motel-type buildings for residents. Cottages to accommodate 2 to 4 people will also be built.

One area of the 20 acres of land within the city limits of DeLand will be set aside for cottages which may be built by individuals, but they must conform to the master architectural plan. It is planned that occupants of cottages may transfer to motel units more accessible to the central services if the need arises.

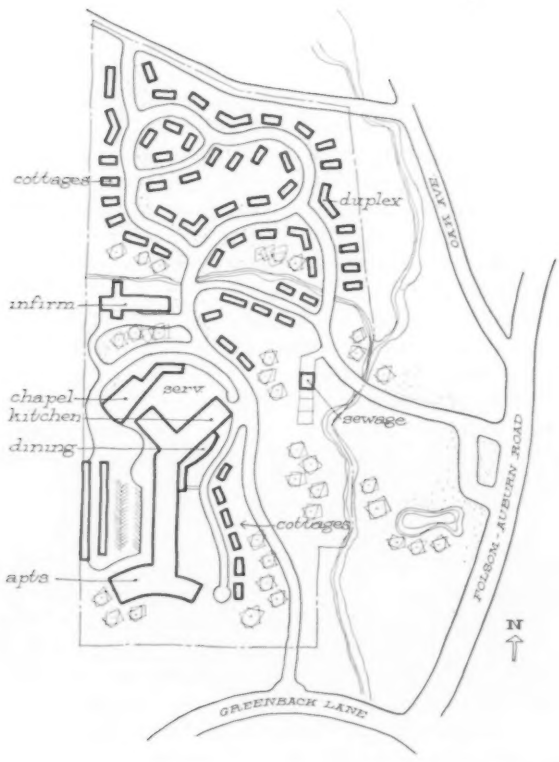
Similar projects are in the planning stages in several relatively small communities, though none has yet been actually constructed.

A Doctor's Counsel for Architects

MEDICAL FACILITIES FOR THE AGING

By Frederic D. Zeman, M.D., F.A.C.P.
Chief of Medical Services, the Home for Aged and Infirm Hebrews, New York

THE OLD-FASHIONED home for the aged, whether under voluntary or governmental sponsorship, was satisfied to supply bed and board to its residents who were assumed to be in such a state of health that only occasional medical care was needed. Today, as a result of more intensive study of the medical and social problems of older men and women, the home for the aged has relinquished its passive attitudes and has developed active programs of prevention and treatment to the point that it has come to be regarded as an intermediate medical facility. Maintaining the same high standards of medical, nursing, and social service practice as the general hospital and the hospital for chronic diseases, it is devoting itself more and more to the active care of the handicapped and disabled aged, since most workers in the field believe that able-bodied old people are best



HEARTHSTONE MANOR, FOLSOM, CAL.

Rickey & Brooks, Architects

This lush-looking watering place is proposed with the theme "own your own home and retire with life care." Patently not for indigents, it plans for the ownership of a house or apartment and payment based on age for life care. "Life care" includes meals, laundry, some medicines, infirmary care but not to the extent, say, of major surgery. Says a press release, "Designers have sought a 'mellow, homey atmosphere' for elderly citizens by a combination of natural stone and woods with cheerful colors and easy-to-maintain finishes. The Manor will be of steel and reinforced concrete, including a lobby, kitchen, offices, lounge, dining room, shop, auditorium, chapel, library, hobby areas on each floor, terraces, and 200 apartments. Each apartment will have its own entrance, a bath with each bedroom, a pullman kitchenette, a colorful balcony with sliding glass doors and aluminum and porcelain enameled panel railings." Also, "there will be automatic sun-control devices, air conditioning, elevators, push-button conveniences and safety features throughout." So dawns a new day for the old folks.

maintained in the community in their own homes or in foster homes.

The differences between the modern home for the aged and the general hospital lie in the admission of residents for life and in certain specific limitations in the kind of care offered. Surgical cases, as well as those requiring elaborate diagnostic or therapeutic procedures are transferred temporarily to the general hospital. By this means the maintenance and duplication of expensive ancillary services is avoided and the costs kept down.

These considerations illustrate clearly that while certain medical installations are necessary, they will be far less complex than those of a general hospital. On the other hand, far more attention must be paid to recreational and occupational therapy areas, to the provision of closet space in the rooms, to safety measures, to the creation of a relaxed, congenial atmosphere, and to the development of flexible plans to take care of the ever-changing medical requirements of the residents.

Whether homes for the aged should be located in separate buildings on the grounds of a general hospital has been much debated. Administrators of hospitals argue for the ready availability of medical care, of diagnostic facilities, for reduced costs, for example, in laundry and heating installations, and for greater ease in management. This writer admits willingly that these are important considerations, but that where this plan has been followed, the old people, in competing for medical attention, have come off second-best. The pressing demands of the acutely ill lead to the neglect of the old people, who, in the minds of hospital staffs, professional and nonprofessional, present not only uninteresting but often disturbing problems. Stephen Paget in discussing hospitals spoke of the characteristic "*genius loci*." The spirit of a home for aged is totally different from that of a general hospital. The whole tempo is slower, the patient turnover is slow; the staff comes to know the residents intimately, and to participate happily in the unending battle against encroaching and accumulating years. The modern home for the aged is truly "patient-centered," not "disease-centered" as is the hospital. The physician entering the independently located and managed home for the aged automatically concentrates his thinking and his activities on the problems of old age, free from the distractions so common in general hospitals.

Size

A well-thought-out plan will provide opportunity of additional units and it is well to provide initial installations, recreation areas, heating, laundry, etc., of such dimensions as to take care of future expansion. As to the actual number of beds, 50 to 100 would seem to be a minimum and 400 to 500 to be a maximum. The desire for largeness as part of a competitive spirit on the part of board or staff members is to be deprecated, because somewhere along the line the "Law of the Dinosaurs" comes into action. Large installations lose the personal, intimate human touch that is indispensable to prevent their becoming "institutions" in the unpleasant sense.

As to the proportion of beds for the severely handicapped or acutely ill to that for ambulatory patients with less severe disabilities, the planner must take into consideration the admissions policy of the organization. Even though an effort is made to screen out the individuals needing maximum care, time will surely change many from one class to the other. At least half of bed capacity should be devoted to those needing active medical or nursing care, or both, and appropriate provisions made for nursing stations and utility rooms. In a well planned home of moderate size, residents suffering from minor intercurrent illnesses can be taken care of in their own rooms.

The Medical Area

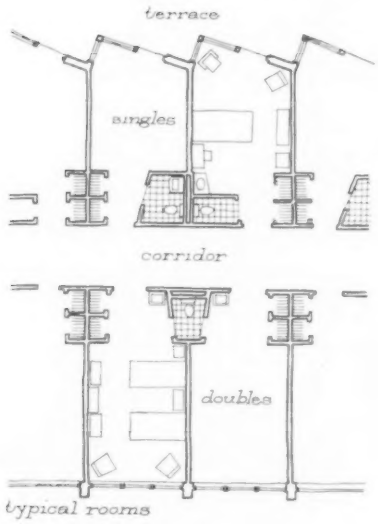
The activities of the medical department of the home are best grouped together for efficient operation. Included here are offices for the attending physician and the head nurse. The medical secretary's office may serve as a record room, and at times may also house a small medical library. In view of the tendency of most libraries to outgrow their facilities, a separate room is desirable, which may double as a conference or committee room. Examining rooms, with adjoining dressing rooms, should be large enough for a standard examining table, two or three straight chairs and a small table for instruments, and give enough space for physician, nurse, and patient to move about freely.

Separate offices, or workrooms, must be provided for the dentist and the podiatrist, both essential for health and comfort of the residents. A laboratory equipped with a chemical hood, and with gas, electric pressure and suction outlets, is essential for clinical studies involving methods of precision. A small room for electrocardiographic and basal metabolism studies is also needed. Space for storage of drugs is essential. In this area should be located the diagnostic X-ray equipment. This installation requires one room for equipment and another smaller one — as an office and viewing room for the roentgenologist. A toilet should be provided in close relation to X-ray room for evacuation of diagnostic barium meals.

The rehabilitation and physical medicine equipment may be placed in the medical area, or perhaps better, should be closer to the infirmary to facilitate movement of patients. This room will provide exercise facilities, such as parallel bars, and a variety of mechanical devices, as well as whirlpool baths for arms and legs. Small cubicles should be available for massage tables and for electro therapeutic devices.

Recreational Area

The program of the modern home for the aged is essentially psychotherapeutic and has been described as a "total push" effort in which are integrated the efforts of physicians, nurses, social workers, and all other staff members in order to restore the self-confidence as well as the physical well-being of the residents. Organized recreational activities are part of this program,



MEMORIAL HOME FOR THE AGED

Chicago, Ill.

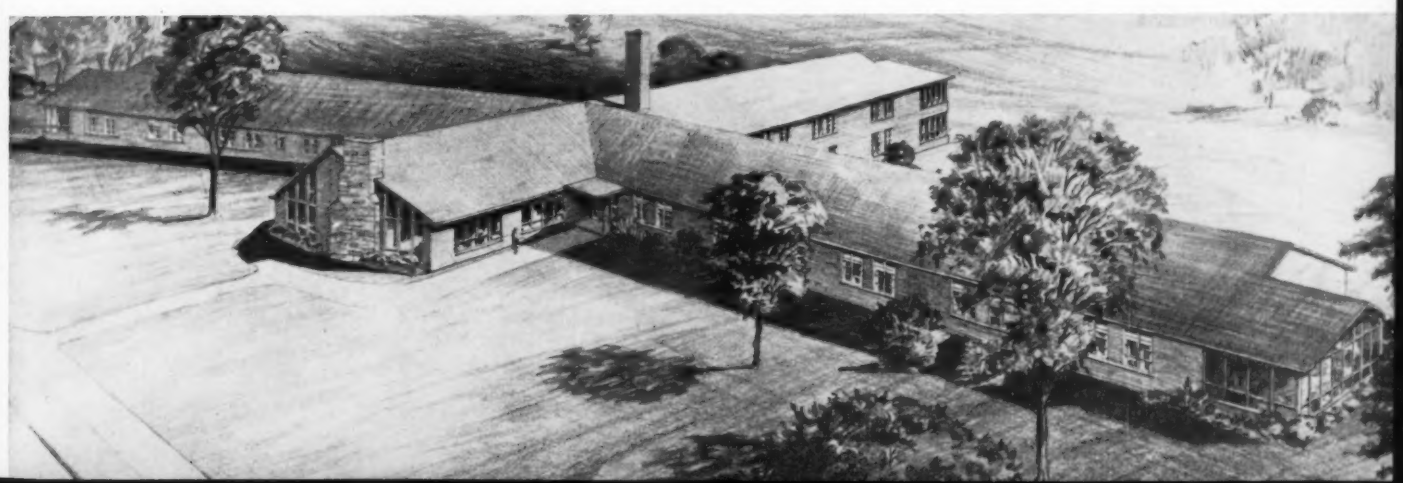
Loewenberg & Loewenberg, Architects

This scheme for a home for the United Lutheran Social Mission Society of Illinois proposes that two of the bedroom wings have sawtooth walls to provide light and view in two directions from each room. An outside door from each room would permit residents to step outside with maximum ease to enjoy lawns and gardens. The curving central section would have chapel, dining facilities, physical and occupational therapy, doctors' offices and treatment rooms. The building is planned for 35 residents, all in single rooms.

HOMME HOME FOR THE AGED, WITTENBERG, WIS.

Donald M. Schoepke, Architect

While this is a rather large home it avoids institutional suggestions. All patient rooms, except in the infirmary section to the rear, are in one-story wings of generally residential appearance. Bedroom wings are angled slightly to prevent corridor vistas from becoming too long. Bearing masonry walls were used, with wooden roof trusses. Floor radiant heat throughout.



as are all the activities of the medical department including rehabilitation and physical medicine. Small parlors must be provided for visitors, for card games and for viewing television. A large sitting room serves many useful purposes, such as motion picture displays, meetings of clubs of the residents, entertainments, and for formal gatherings of the friends and supporters of the institution. Special sitting rooms should be provided on each floor of the residential area of the larger homes.[1]

Safety Measures

Accidents of all kinds take a high toll among the aged. Many are preventable by foresight on the part of the physician and the architect. Handrails, 30–36 inches high, must be provided in rooms and in all hallways. Non-skid flooring is essential, good lighting, especially night lights in baseboards, prevents many mishaps. Toilets must be provided with hand grips and call bells. Entry to these stalls must be possible by wheel chair. Bathtubs must be provided with hand grips, non-skid mats and a seat at one end for resting. Location of tubs at right angles to one wall, leaving free access on three sides, facilitates handling of infirm patients by nurses and attendants. Window sill should be high and casement windows of small aperture are advantageous. Sharp changes in floor level should be handled by ramps rather than steps. In general, stairways should be wide, of gradual slope, and provided with non-skid treads and handrails on both sides. In designing bedrooms, every effort must be made to arrange for unobstructed pathway from bed to bathroom. So often the older person arises from his bed, slightly dizzy, and uncertain, trips over a chair, table, or small scatter rug, and sustains a serious injury.[2]

Infirmary Area

Where residents requiring active medical and nursing care for long-term or acute intercurrent illnesses are housed, the installation more closely approaches general hospital specifications. Units of two beds are preferred although four-bed units are permissible in order to facilitate the work of the nursing staff. Each bed must have a bed light and a call bell. Doors to single or two-bed units must have windows to allow quick inspection by passing nurses. Nurse stations and utility rooms must be provided. Each floor must have one or two single-bed units near the nurses' stations for the moribund or noisy patient.

Occupational Therapy

The varied activities grouped under this heading require a small suite of rooms, each devoted to one or more special activities such as woodworking, basketweaving, ceramics, leather crafts, painting, weaving fabrics and bandage rolling. An office for the therapist is needed, who will appreciate provision of display cases here as well as in the main entrance of the home. These rooms must be large enough to accommodate 6 to 8 men and women, working independently but nonetheless enjoying the benefits of group effort.

Miscellaneous Considerations

Planning must, as already emphasized, provide for future requirements in a liberal way. Too often, the space allowed will seem more than adequate on paper, and even in the first year of operation, only to prove later to be skimped and tight where changing conditions and increased admissions change the operational picture.

Kitchens, however centrally located in relation to the main residents' dining room and staff dining quarters, will rarely be able to send food to infirmaries warm enough for serving. Insulated heated food carts furnish convenient means of transportation, but pantries must be available on the floors for serving food from the carriers, as well as for preparation of special foods and liquid nourishments.

Many well-built hospitals and homes do not provide adequate or attractive dressing rooms and locker space for personnel. In a competitive labor market, these often overlooked considerations are all important. Rest rooms and sitting rooms help to make working conditions attractive.

Storage of wheel chairs in the infirmary area is a problem often overlooked. Standing about in hallways, they form accident hazards and add nothing to the beauty of the scene. Large, unlighted, unventilated spaces serve this purpose admirably.

Adequate storage space for supplies makes possible buying in quantities and thus reducing costs of operation.

Administrative offices for executive director and other staff members, as well as the social service department and the accounting division should be centrally located and should have their own waiting room.

Separate paths of circulation should be provided in planning in order to prevent business visitors encroaching on the sick area, and to separate the streams of visitors to different parts of the building. The medical department and the infirmary should enjoy privacy.

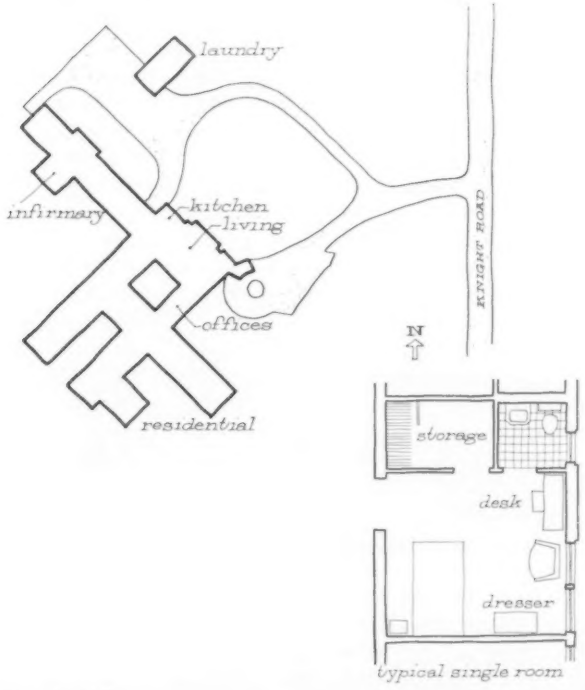
Summary

In discussing medical considerations important in planning a home for the aged, emphasis has been placed on the combination of facilities for medical care with opportunity for pleasant, relaxed living. Ample recreational areas make possible carrying out programs of value in promoting mental health. The differences between a modern institution for the aged and the general hospital have been pointed out. Stress has been placed on the prevention of accidents to residents by eliminating a variety of hazards inherent in certain types of construction. In short, a thoughtfully designed structure will facilitate and stimulate the functioning of an organization aimed at promotion of health and happiness in elderly men and women.

References

[1] *The Architect Looks at Housing the Aged, 1953, Housing Research Council of Southern California, Inc., Pasadena.*

[2] *Zeman, F. D.: Accident Hazards of Old Age: The Physician's Responsibility in a Program of Prevention. Geriatrics, 3:15–25, Jan.-Feb., 1947.*



HOLLY HALL, HOUSTON, TEXAS

Cameron Fairchild & Associates, Architects

This home for the aged, sponsored by the Houston United Church Women, now has single rooms for 61 residents plus a 14-bed infirmary wing; its kitchen facilities were planned for an eventual population of 250. The site plan includes an addition to the infirmary wing and an added residential wing. Rooms are quite spacious; each has its own toilet and an exceptionally large storage closet, since most old people have a great accumulation of cherished possessions. The building sits 8 in. above the finished grade; all entrances are ramped. Ceilings are of mineral acoustic tile; floors cork. There are hand rails in all public areas, and bedroom doors are wide enough for beds to be wheeled through them.

Douglas Fairchild

Changing Needs of Older People

IMPROVED HOMES FOR THE AGED

By Ollie A. Randall
Consultant, Services for the Aged
Community Service Society of New York

WHAT ARE SOME of the factors making for a change in the attitudes, practices and programs in which older people are involved? First, there are too many older people for them to be cavalierly consigned to thoughtless and antiquated situations. Then, too, older people are no longer paupers in yesterday's meaning of that word. In spite of the low level of income among older people, it is increasingly true that practically no one need be without some cash income from some source or other. With social security payments reaching a new high in numbers and amounts, with pensions and annuities more common, older people are in a far greater number of instances in a position to finance more adequately at least a portion of the cost of their care in homes for the aged. This ability to pay, in whole or in part, makes for an entirely new relationship between the individual and those providing accommodations and service or care. The major difference is that the old person is, or should be, an active participant in the arrangement which is made. He is no longer "placed" by someone, against his will or without his knowledge, unless he is mentally incapable.

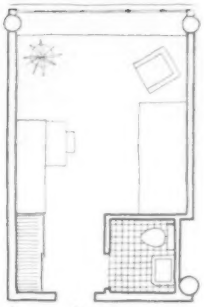
Not only does this change in the manner of payment make a difference in the feeling of dignity and independence for the individual resident, but it makes a great difference in the manner of financing the work of the home. It makes possible a change in rates as those changes are warranted. It also means there is a reduction in the philanthropic element. But mainly it places the management of homes somewhat more on their toes to see to it that their programs and services meet what residents want, need and should have and what the community is newly aroused to want for them.

It is here that the major differences in our concepts of living through the later years have occurred. It goes without saying that older people are among the beneficiaries of the many good things which accrue to all of us through the advances of medicine and related sciences — as well as of the years themselves. They are not only longer lived than their forebears; they are, in spite of common opinion to the contrary, as a rule much healthier. They remain vigorous and relatively able-bodied into their seventies and eighties. They continue active, taking part in the life of their communities when they are permitted to do so; they go on working; they carry responsibilities for themselves and often for others; they play; they follow their hobbies and avocations; they travel. They tend more and more to live by themselves in their own homes, maintaining themselves on their limited incomes (the majority of them), until some disaster such as the loss of family or social contacts or a catastrophic illness drives them to seek the security of what is nowadays known as "sheltered care."

What then is the function of a home for the aged today — and what is it likely to be tomorrow? Today institutions house from 4 to 6 per cent of the older people of the country, using 65 as the beginning age, which is a great many people. At 5 per cent, this kind of living would account for some 700,000 persons — and most of us close to the situation are convinced that this is by no means the number of persons who could or should profit by living in such homes, provided there were enough of them and they were properly designed, built and managed. As the number of older persons continues to grow, so will the need for sheltered care. But the demand will be for persons of a somewhat different group with different needs from those which prompted people to ask for such a plan in years gone by.

A home for the aged is over and above all else a place to live. It means a place in which every resident has the opportunity to live to the fullest of his own capacity. With this as the goal — general as it sounds — we have all the opportunity we could want to use modern materials, modern design, and to give scope for those flights of imagination which in our modern world seem to need to know few if any bounds. The day has long since gone when we must confine ourselves to the accepted patterns of living or of places in which to live. If the newer ones of which architects, builders, engineers are justly proud, offer greater comfort and ease of living, are not older people the very ones who should have the advantages of space, controlled climatic conditions, light and air and a wide view of the world and the people in it? The outworn argument that older people cannot adapt to the new — that they are only content with the old — holds true no more than does any generalization for any group of human beings. As a matter of fact, older people willy-nilly have had to acquire a habit of adaptation to many changes — and rapid ones at that. This is a fact that most of us are quite apt to forget or overlook.

The home for the aged of the future must be a home, with all that connotes. It must be a place where "the heart is." No matter how fine, it is at best a substitute for the resident's own home, however humble and plain that may have been, but it can be so built, so designed, and so managed that the substitute may ultimately



typical room

BAPTIST HOME, CINCINNATI

Proposed Addition to Baptist Home and Center

Woodie Garber & Associates, Architects

Need for infirmary rooms was one of the reasons for this proposed addition to an old home. The new wing of four stories will add 30 beds in a hospital section and 54 residential rooms. The infirmary portion is planned for conversion later to residential rooms should the older portion be replaced in the future. Each guest room is approximately 12 by 17 ft, with a large glass area.

Loelen Studio

JEWISH HOME FOR THE AGED

Rochester, N. Y.

Benedict Ade, Architect

Demand for care for the aged has so increased that this home has been added onto twice in six years. From 80 residents it has grown to 215, the latest addition raising the bed capacity by 64, mostly in double rooms.

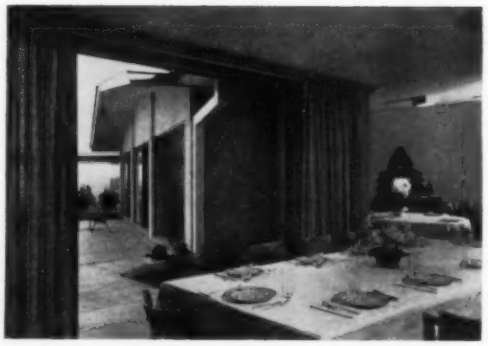
prove to be as satisfying as the home that has been left, if not more so, because of what it can offer in meeting a person's need to belong, to be useful, and at the same time to be somewhat sheltered from the stresses of community living with which he is no longer able to cope by himself.

The home must be so situated that it is accessible for the entire family, residents and staff, to those "goods and services" which the community provides for its citizens — the church, the school (adult education), the doctor, the clinic and the hospital, shopping, work, entertainment. It is not easy to give all this and still give space for some outdoor living and gardening for those whose circle of activity must be geographically circumscribed because of failing strength or crippling infirmities. But the sense of space, with the green of trees and shrubs and the colors of gardens, large or small, to give it depth and a feeling of freedom from confining walls, can be achieved even in city or suburban areas.

The home will need to provide not only the opportunity for living without a feeling of isolation in the city or town, but it must be so constructed as to provide a full life for those who will not be able to venture forth. The doors must open both in and out — to let the community come in to be a part of the life in the home as well as to permit residents to go forth. The home must invite friends and relatives to visit as they do to any family home. The living rooms, the recreation rooms for activity and entertainment and the auditorium for passive entertainment and for worship, the hobby rooms and workshops, the dining rooms, the library, must be pleasant but functional, so planned that they help rather than hinder the residents in the things they wish to do together or alone. The rooms of those residents who are well and able to get about should be single rooms, and double rooms only for couples who wish to be together. Perhaps rooms can be so planned that there will be a more flexible use of walls, which in our old buildings are such deterrents to good use of space because they are so difficult and expensive to remove or to change. Single rooms might become double — and double rooms ought to be capable of conversion into single rooms, as the constant shifts in the composition of the household dictate.

The home will house people older in years — on the average — or at least more of them in the upper age brackets than used to be the case. And the meaning of this for living and building is clear. There will be more and more of them who will need the protection of general supervision and watchfulness, and active nursing care in those illnesses more characteristic of old age than of the earlier stages of life. This too leads to the thought that the possibility of a flexible use of the building is of vital importance, for as more persons require nursing there will need to be space that can be used as an infirmary with an efficient use of space and of scarce nursing staff, without loss of the quality of hominess.

Admittedly this is a most difficult thing to do, but the emphasis here is on the "home," and no hospital



Truman G. Smith

SHREVEPORT HOME FOR AGED

Neild-Somdal-Associates

Architects and Engineers

A fifty-year-old home for the aged has just added these two new wings, containing 40 bedrooms. The rooms are for single occupancy, but can be used by two persons if need increases. The home does not have medical facilities since a large charity hospital is near by, but the new wings have bedpan sterilizers and utility rooms which can be converted into nurses' stations. It is largely a charitable home for residence, but future plans call for some cottage units and for activity buildings for crafts, shops, and so on. The new building is fully air conditioned with individual room controls for both heating and cooling. The decision to provide such an elaborate mechanical system was based on experience showing that in care of old people temperature control could provide more trouble or pleasure than any other factor.

can ever become a truly acceptable "home." With our new knowledge of older people — their wish to live and to serve and to have other daily occupation than breathing, eating and sleeping, we realize that even the infirmary must be so designed as to provide for diversion, for entertainment and even work for others, for patients singly or in groups. Patients are not bedbound so long as they were once, and their interests, even those who have withdrawn from the reality around them, can be directed to the world around them, to people other than themselves, and to a relatively high degree of creativity.

The whole setting must be one which stimulates those interests, which encourage optimism, and which makes it possible for staff to accomplish the daily routines of living with a maximum of efficiency and a minimum of unnecessary physical effort. There must be provision for rehabilitative therapy, but the whole atmosphere, derived from the effectiveness of design, must be conducive to a rehabilitative state of mind on the part of the patient, staff, and visitors alike.

It might be possible to sum up the home for the aged of the future as a place in which any one of us will be glad and proud to live so long as that answers our personal needs (and we cannot judge too accurately in advance what those physical and psychological needs will be); a place in which we can remain if that suits us, or a place from which we may return to the community refreshed in body, mind and spirit, if that too is what seems wisest and best; a place which supports us in our desire both to serve and to be served; a place in which as persons we have meaning to ourselves and to others; a place in which there is assurance of concern for our well-being and care in the event of illness; a place in which each new day is to be anticipated for the "something" of interest it will bring; a place which is so much a part of the community in which it is located that we too are a part of it; a place in which older people may truly be said to find themselves and to have the opportunity of demonstrating positively how fully life can flower in the later years under favorable conditions.

No Single Solution Covers Everything

THE NEW PROGRAM AND THE ARCHITECT

By Walter K. Vivrett
Associate Professor, School of Architecture
University of Minnesota

MEASURING THE OBJECTIVE and the program of the home for the aged by today's knowledges of group work and institutional effort, and measuring the physical environment by the architectural achievements in other institutional areas, the home for the aged with both ideal program and environment is, to all intents and purposes, nonexistent in the United States.

If the measurement of program is dropped, and only the physical environment, the buildings, are measured, the worthy-of-mention buildings are a paltry few. The home has plodded along with little or no help from architects and planners.

Of the more hopeful, and optimistic aspects of the institutional picture and of its work in behalf of the aging and the aged, three particular points stand out:

1. The tremendous strides in establishing both a philosophy and a service technique which the young profession of social welfare has achieved.
2. The general public consciousness which physical medicine and rehabilitative therapies have awakened.
3. The successful experiments in home care and in self care which have established techniques for meeting some of the problems of long term illnesses — particularly those from which we can convalesce, or which we may arrest.

Today, the institutions for the aging and the aged are faced with several clearly identifiable, and sometimes paradoxical questions. These questions require, not exclusively, but certainly close coordination and participation by both architecture and planning:

1. How can institutions provide congregate, group living environments of a standard at least equal to that available in residential communities?
2. Can such congregate living environment be provided at a cost at least equal to, if not less than, the cost of living in the community proper?

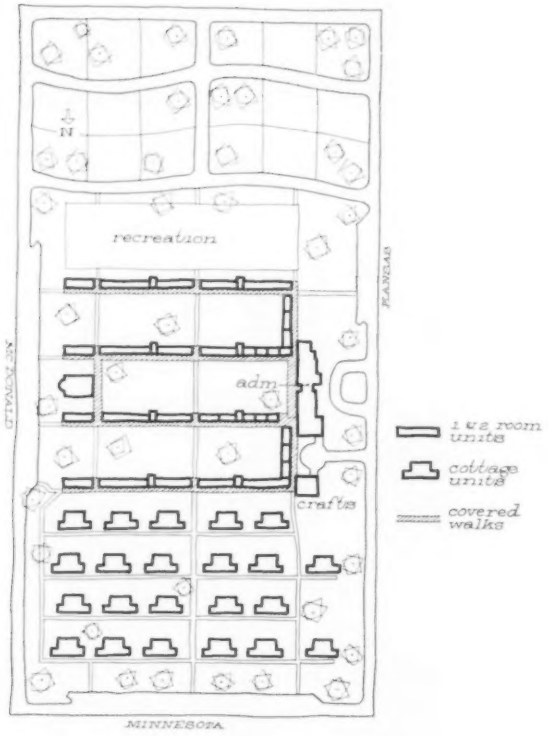
Or, of a more architectural bent:

3. Can the physical environment in these existing types of institutions, or new types of institutions, be manipulated to perform the many tasks — psychological, social, and therapeutic — which the new philosophies of milieu therapy demand?
4. Even once the institution staff has accomplished a statement of philosophy and objective — a statement of the care and service to be performed (and this is no mean feat), will it be possible to develop appropriate architectural expression and form?

ALLEGHENY LUTHERAN HOME, JOHNSTOWN, PA.

Hunter, Caldwell & Campbell, Architects

This is a new version of a home already in operation at Hollidaysburg, Pa., by the Lutheran organization, and is almost identical with the one described in a letter from the administrator on pages 218 and 220, though much different in architectural character.



FLORIDA LUTHERAN RETIREMENT CENTER

At Deland, Fla.

Jas. Gamble Rogers, II, Architect

Plans for this retirement center call for 22 duplex cottage units for couples and four long single-loaded corridor apartment units with one- and two-room apartments. There will also be an administration building with lounges and dining room, and a church building. No infirmary is planned for the initial stage, but may be added as the need arises. The site is a large rectangle, 660 by 1320 feet, with twenty acres.

The new environment of the emerging types

The *home for the aged* is emerging as a new institutional complex in which the physical and psychological transition between the community outside, and the environment inside the walls is almost indiscernible. The objectives, the programs, and the physical facilities are ordered so as to encourage and make possible the continuance of earlier patterns of living, daily routines, personal care habits, self-expression in social contacts, and recreational activities, and, where necessary, introduce new ones. The institutional services are extended beyond personal care and semi-skilled nursing, to include preventive and intensive therapy and rehabilitative techniques.

Group use spaces (lounges, dining rooms, activity-recreation rooms, therapy treatment spaces, etc.) are sufficiently flexible in design and construction to be easily adapted to the changing needs of group work. Institutional building committees have been induced to accept far too many poor packages in recent years — packages in which group use and treatment spaces were frozen in physical dimension and use by masonry walls and permanent construction. The real need here is for spaces which one can rearrange every 5 or 10 years, not just once in a 100.

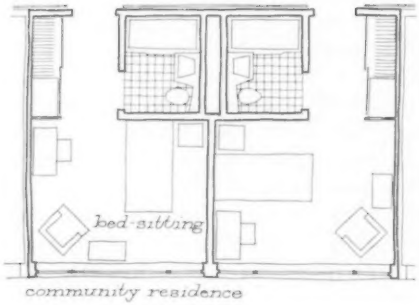
Somewhat along the same lines comes the continued effort of architects as well as building committees to talk of economy and to slash away at initial investments in physical environment. As the home for the aged is becoming more and more aware of the part which physical environment plays in milieu therapy, there is less argument in favor of initial savings, and more argument in favor of environmental qualities appropriate to the objectives. Architects and building committee of the Presbyterian Village in suburban Detroit are indeed to be commended for their decision to provide the optimum environment despite the knowledge that "square foot costs" might be more than costs for the run-of-the-mill institution.

Outdoor spaces are developed — not just in sunny California or Florida but also in colder climates — so as to provide suitable spaces for the newer techniques of group work and programming effort. (Beware the frequent superintendent of the institution who says: "Our old people don't really like to go out doors even in the summer; the bugs bother them, or it's too far for them to go.") A part of this effort out of doors is specifically directed toward self-expression out of doors. Tomkins Square House in New York provides individual planting boxes on its roof terrace with equipment storage closet nearby; the result is that any summer morning will find one or two persons busily pruning, watering, and admiring the plants. Or at Senior Center, in Santa Barbara, where limited funds prevented too much organized landscaping, the individual resident and the climate favorable to lush growth have produced a wonderfully sensitive outdoor environment. One hopes that the management at Presbyterian Village will retract its requirements that residents garden only in the or-

Lens-Art

1 bedroom apartment

2 bedroom apartment

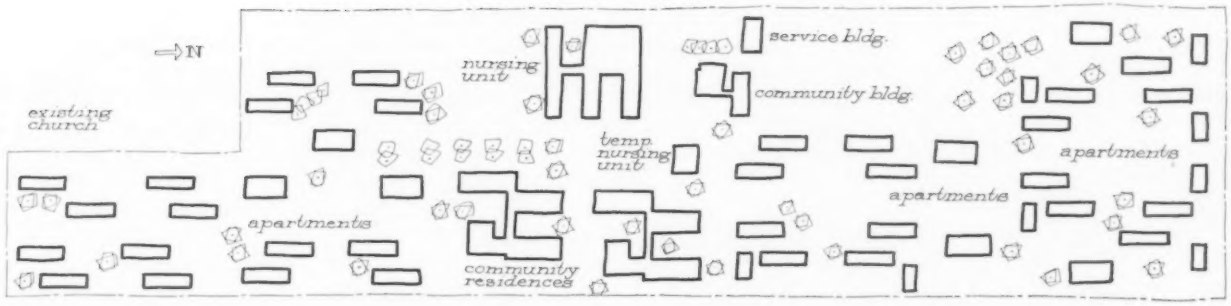


PRESBYTERIAN VILLAGE, DETROIT

Smith, Hinchman & Grylls, Inc.,

Architects and Engineers

A major study of needs of the aged preceded the building of this pleasant home by the Presbytery of Detroit. It was decided that four basic building types would serve the aged in all of the statuses of their remaining years: individual homes for couples who could afford and could maintain them; one- and two-bedroom apartments for couples who could live independent lives; a community residence for those living alone; and a nursing unit for those needing care, but not hospital patients. The master plan calls for these types, plus the administration building, chapel and so on, eventually to house some 500 guests.



ganized plot on one of the sites, and encourage those residents in row houses to somehow express their individuality outside their kitchen doors.

The individual living quarters are designed so as to accommodate readily the full range of handicaps and disabilities which come with old age. Nursing care, use of wheel chair, and other aids are not precluded by design which thought they could not occur. Not just the present standard of community living, but the still rising standard of living (which the older generation of tomorrow will claim) is taken into account in order that the environment will not be outmoded before it is well occupied. Private or semi-private toilet and bath facilities are already requisite. Telephone, broadcast, and communication systems are considered. One might well speculate on further possible aids to self care, particularly of the pushbutton variety. (Why can one only get "power windows" on automobiles?)

The *recreational and activity center* for older adults — not too dissimilar to the youth center and frequently a part of the established community effort — is now an established institution. These are the centers which solve the problem of empty hours for the older adult of the community — the adult now retired, or widowed, or perhaps with so few friends left in the neighborhood. Typical of the refreshing environment being provided by these centers is Little House at Menlo Park, California. Here Peninsula Volunteers provide not only a program, but a staff to guide, and an appropriate environment in which to accomplish the program.

Occasional efforts have been directed toward occupational and vocational programs, in particular the sheltered workshops — sometimes functioning as a part of a home for the aged, sometimes as an independent type. In one instance, the spontaneous private effort of a few individuals has resulted in the exciting activity of Craft Village in St. Petersburg, Florida. Here, the small businesses of many retired individuals flourish.

Private, individual living units are becoming more and more in demand — either as part of the home for the aged, or as an independent type of building. The apartment, the apartment hotel, and the hotel adapted to the special needs of older persons — represents an environment closely akin to that which was enjoyed in earlier life. It is not surprising to observe the trend of older hotels being utilized in a number of ways:

The William Penn Hotel in Los Angeles (under private management) announced last year its plan "for happy living for the middle aged, the retired, the single business man or woman, couples, the young at heart and rich in years."

Casa de Mañana (Methodists of Southern California) and White Sands (Presbyterians of Southern California), both in La Jolla, are two of the many resort hotels which, as a part of their larger institutional organization, offer superior accommodations to well older persons of means.

The Boulevard Hotel of Miami Beach, rehabilitated under private initiative, now offers hotel living for older persons at low rates (beginning $60–$70 per month for room and board) and further arranges for a large number of their residents to reduce this charge by a cooperative-work plan in the hotel.

Many institutions are taking a second look at the communities in which they operate. They are discovering that communities vary and, as a consequence, that their own institutional planning should be an integral part of the planning for total human services in the community. Such is the demand of the political, social, and technological era in which we live.

In Minneapolis-St. Paul, Minnesota, where there is almost no concentration of older adults in any specific area of the cities, but rather encouraging distribution of older adults throughout all communities, a coordinated effort is being made to plot community resources and potentials and to measure the sufficiency of these in terms of the older population which these resources and potentials must serve. In one community it may be determined that there is required an extensive institutional effort — including not only domiciliary, custodial, and nursing care, but also an out-resident center to meet the total needs of those yet able to remain in their own homes. In another community, it is visualized that only minimum additional effort and facilities will be required — merely the addition of a flexible space to be used by older adults for occupational and recreational activities.

In New York City, the Home for Aged and Infirm Hebrews cares for approximately 1000 persons intramurally in its institutional complex — Central House and a group of apartment residences in New York City, and Kingsbridge House in the Bronx. Extending its present extra-mural services, it proposes to reach an eventual 3000 additional persons living in the communities in which its buildings are located.[1]

In Jacksonville, Florida, Sidney Entman, Executive Director of the River Garden Home, states that the Jewish population has well-established homes and families in the community and that, for the most part, it demands of the institution services of a skilled and technical nature. On the other hand, Maurice Pearlstein of Douglas Gardens calls attention to the fact that the Jewish population, having migrated to Miami, Florida during very recent years, has definite needs for domiciliary and custodial types of care as well.

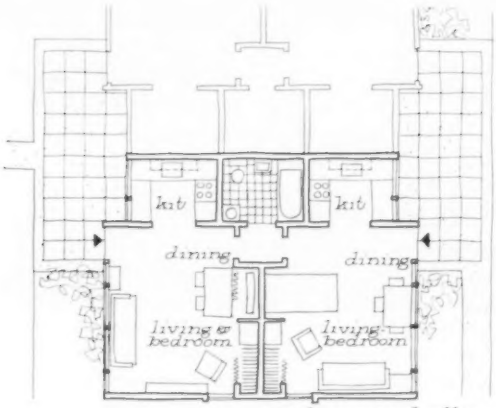
Institutions and communities are beginning to realize the potentials of a two-way relationship between the services of the institution and the community, and between the residents of the institution and the residents of the community. There is a growing demand to have the institution community supporting, as well as community supported.

If the architect and the planner is to serve most effectively in the community effort to provide the physical environment which is such an essential part of the milieu therapy, he must find ways to participate in the formulation of the statement of the problem. He is a part of the problem.

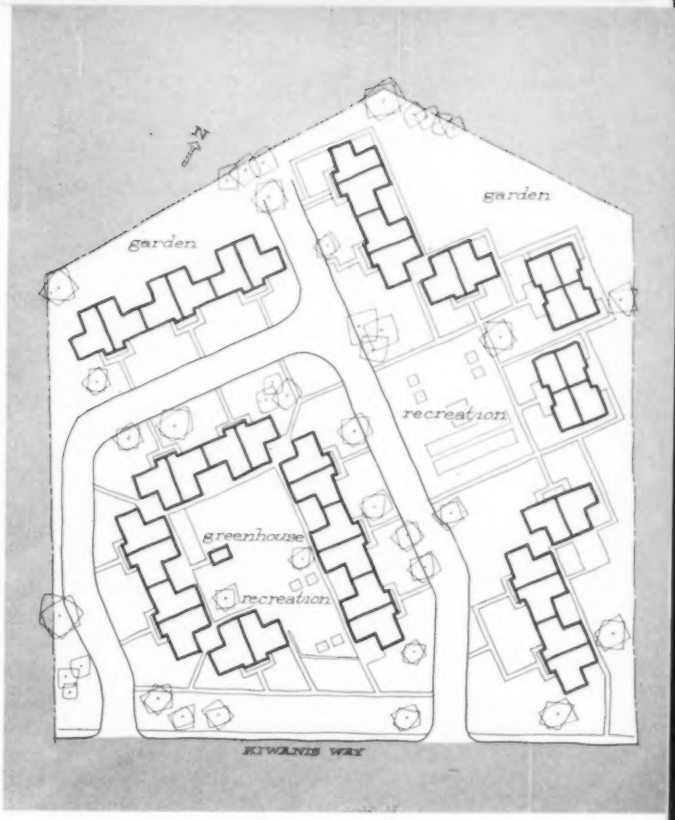
---

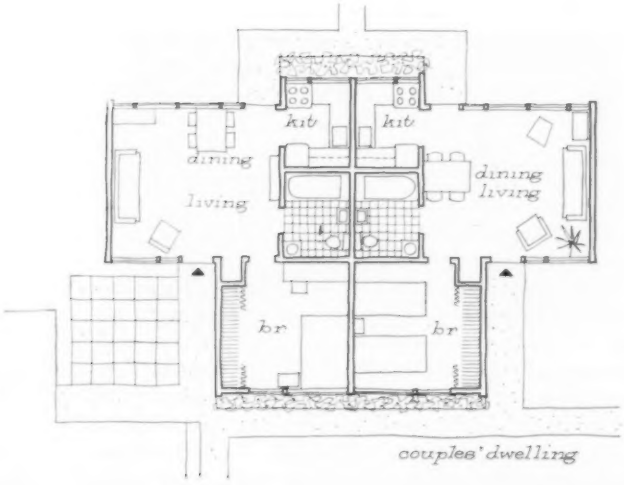
[1] *See Architectural Record Building Types Studies, September 1954, pp. 193–197.*

Fairfield Photo



single person dwelling





couples' dwelling

KIWANIS VILLAGE, VICTORIA, B.C.

Charles E. Craig, Architect, associated with

Sharp & Thompson, Berwick, Pratt

Old peoples' homes don't usually win gold medals for their architects, but this one did: the Massey Foundation Gold Medal for Architecture. The village was built to provide low rental housing for married pensioners unable to afford prevailing rentals. Accordingly there are 34 units for couples, plus 8 single units for survivors. Couples' units have living room, bedroom, kitchen and bath. Single units have bed-sitting room, kitchen, and bath shared with adjoining room. Landscaping plan gives plenty of scope for outside activities, including individual vegetable gardens as well as flower beds.

Superintendents' Comments on Planning

ADMINISTRATORS STRESS GROWING MEDICAL NEEDS

Letters to ARCHITECTURAL RECORD

THE HOME TO WHICH I was called as Pastor-Superintendent in 1940 had 57 guests at that time with a waiting list of 50 applicants. It now has 230 guests and a waiting list of 55 applicants. The facilities and services of the Home have been quadrupled in the past 15 years but a greater number of applicants await admission now than at the beginning of the period.

The average age of applicants in 1940 was 66 years. The average age of applicants now is 78 years. The average age of the guests in 1940 was 72 years. It is now 82 years.

Largely due to increased Social Security coverage and pensions, aged people delay their applications until their need of care compels application to homes of this type. They are much older upon admission, which means that there is an increased proportion of invalids among the guests. The increase in this institution is from 10 in 1940, or approximately one-sixth of the guests, to 85 now or in excess of one third of the guests.

Modern medication does wonderful things in prolonging the lives of the aged but it serves at best to keep them alive but not well, hence the great increase in long-time invalidism. Furthermore, it keeps the body alive beyond the mind, with the result of a great increase in senility.

Our enlargement program of the past 15 years included an Infirmary Building for 65 invalids, complete with diet kitchen, elevator, doctor's examining room, nurse's call system, and all facilities and equipment for the care of the ill in private rooms with wards for "in and out" patients. We were in error in our estimate of the proportion of invalids to well guests. We were in error in not providing invalid rooms apart from the other rooms and wards for the segregated care of the senile patients. It is our conviction that institutions planning to enlarge their facilities should plan infirmaries for the care of one third of their guests as invalids and separate facilities for the care of the senile.

Robert L. Lang, D.D.
Pastor-Superintendent
National Lutheran Home for the Aged
Washington, D. C.

THE MAIN THING to say about the medical needs of older people is that anybody who starts a home for the aged is actually starting a nursing home. He may not think that he is but in a short time he will find that is what he has. There are homes which operate on the principle that people who become nursing cases will be turned out. But personally, I have no use for that type of home and that is not the way we operate. We do not pretend to give treatment. We give care and can give care under any circumstances. People who need treatment are sent to the hospital for the period of time required. Special provision should be made always for the care of the senile.

George W. Nelson
Superintendent
Presbyterian Manor
Newton, Kansas

ONE OF THE FUNDAMENTAL problems in caring for the aged, as we see it, is to administer to their spiritual, as well as their physical needs. Therefore, it would seem to be imperative that the basis of a Home be that it is conceived and operated by a church group with private funds, rather than a state institution. This goes very far toward insuring the peace of mind of the guests, who, as the body wanes and the spirit waxes, are more inclined to be increasingly spiritually minded, and are more at home in the environment and atmosphere that the church alone can provide.

The entire concept of the project should be homelike, pleasantly light, cheerful and, we believe, if possible, with the character of a fine hotel. Inasmuch as most of the guests have more time on their hands than anything else, the occupation of that time, without undue strain on the physical and mental capacities of the guests, is of primary importance. We endeavor to keep our guests occupied and busy. They help with such light tasks about the home as suits their abilities. Insofar as they are able, they take care of the light cleaning and bedmaking of their own rooms.

In general, an orientation with rooms all facing one way with a single-loaded corridor helps provide an excellent atmosphere and character for the structure and automatically insures good ventilation and lighting. One absolutely essential feature which this provides is that all guest rooms have equal facilities and identical outlook, which eliminates controversy. We believe it to be essential that each guest have his own powder room, complete with toilet, sink and medicine chest.

Construction wise, first of all, it goes without saying that the building must be fireproof. The window sills for viewing should be of a height so that the guests can see out while sitting. Windows should have a hopper type vent. Heating should be over-adequate; handrailings should be provided along both sides of all corridors and stairways, and, as many guests insist on using stairways, they should be easy and have frequent landings for resting. Each floor should have a small sitting room or alcove with a good view where the guests on that floor may gather for conversation, games and other activities.

J. B. Linderhal

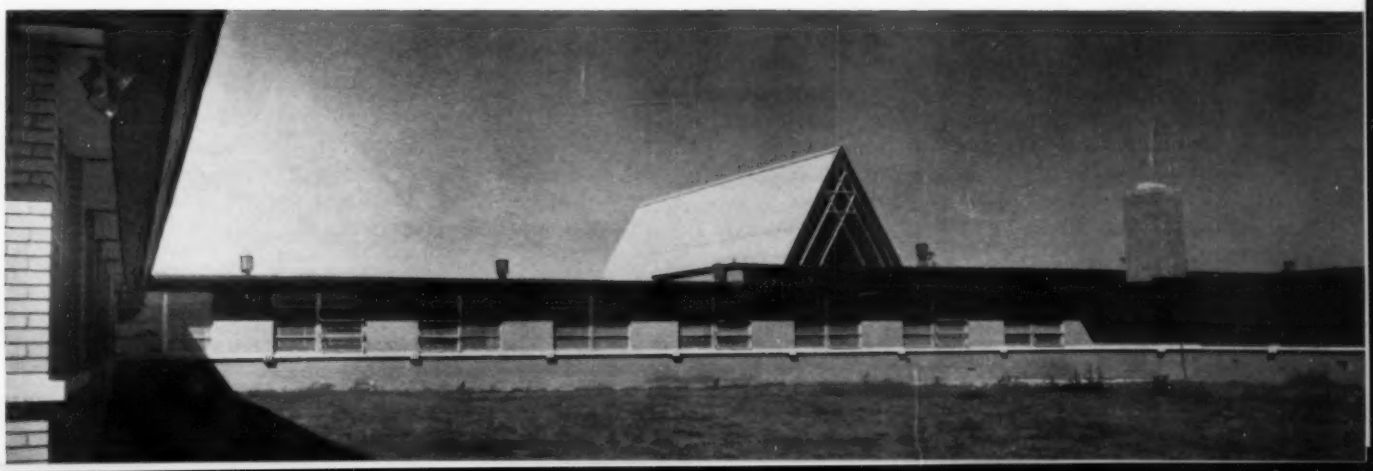
HOUSTON JEWISH HOME FOR THE AGED

Lenard Gabert, Joseph Krakower

Associated Architects

William J. Wisdom, Associate

This home began with accommodations for residents in 32 bedrooms, each with private bath, plus administration facilities, lounge, library, music room, chapel, assembly room, dining, kitchen and service areas. Now being completed is a 17-bed addition to the hospital wing, and eventually the home will accommodate 96 residents.



Open porches should be provided with a type of railing that will shelter from the wind but not obstruct the view. Our particular institution happens to have wire glass railing in panels. Porches should be to the East and West so that the guests can alternate in morning and afternoon.

The infirmary for an institution of sixty odd should have about twenty beds and a full time, complete nursing room setup, including utility room, diet kitchen, nursing station, bedpan sterilizer and a raised tub so nurses will not need to stoop when bathing patients, and a bathlift to make it possible to get patients into the tub easily. In fact, the infirmary should be a self-contained hospital nursing unit.

We have found the high-low type, mechanically operated beds an absolute necessity. When the patients recover sufficiently to get out of bed, it should be a type that can be lowered to a standard height, or the convalescing patient requires constant assistance in getting in and out of bed.

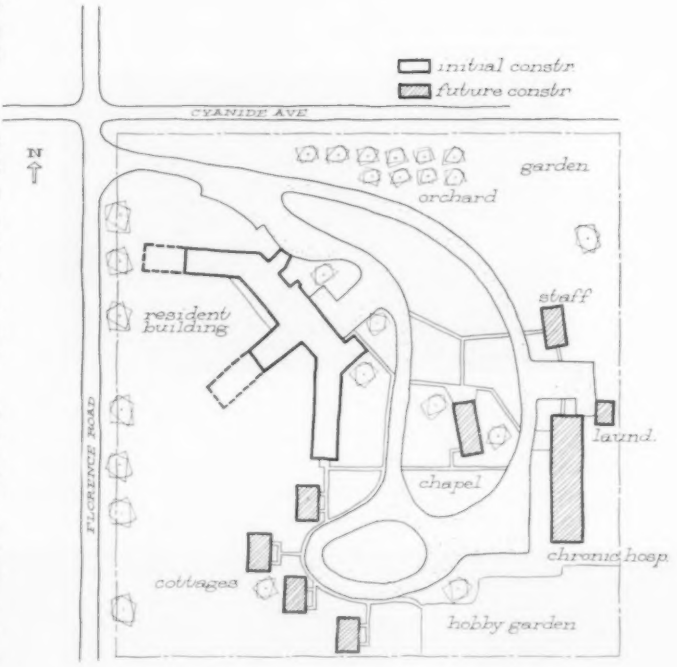
Luke H. Rhoads, D.D.
Allegheny Lutheran Home
Hollidaysburg, Pa.

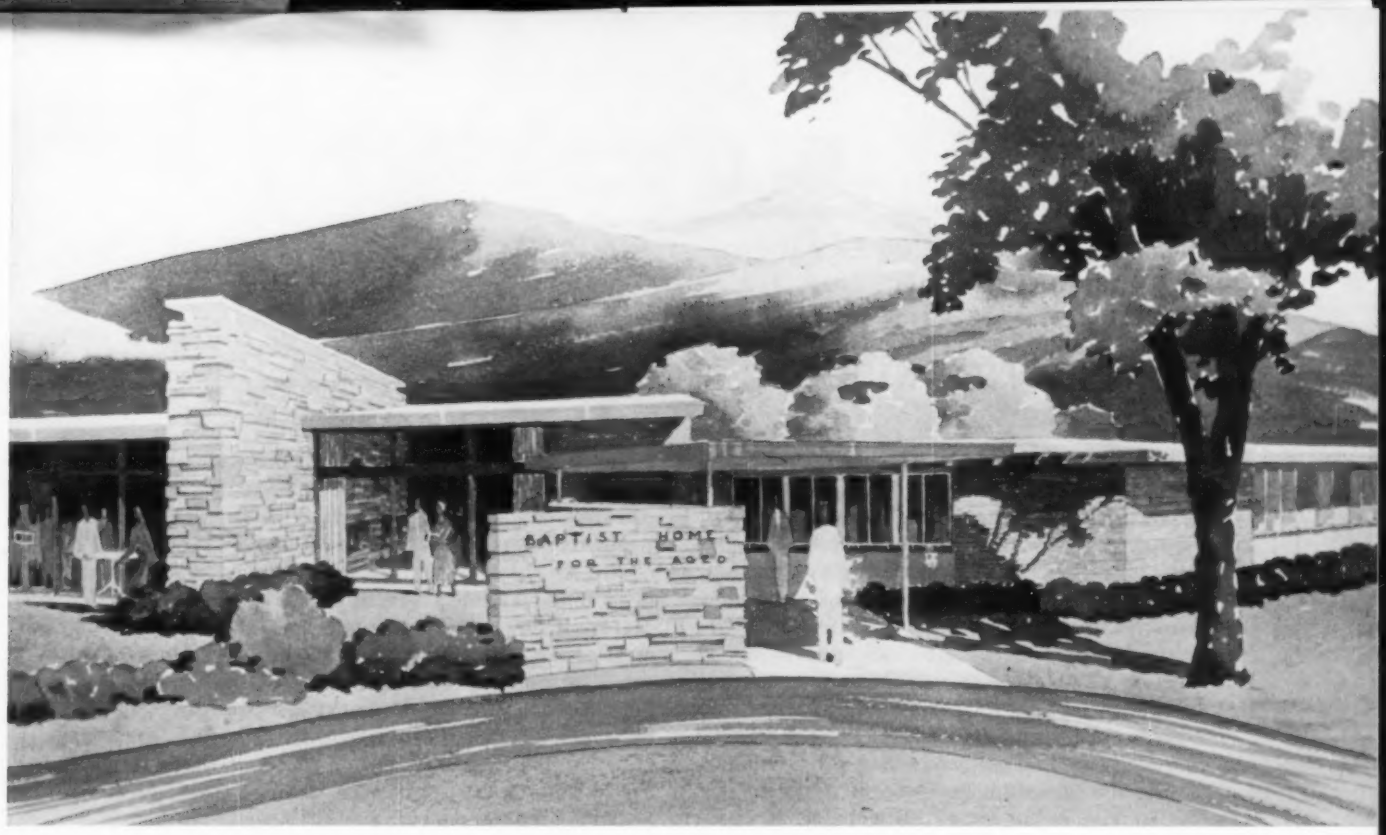
AN IMPORTANT QUESTION in the building of new homes is that relating to the number of single rooms which should be provided. While it is true that some older people prefer to have a roommate, we have found that the big majority would much rather have rooms to themselves. There is of course the cost factor involved in building a home with single rooms.

One of the striking features of our present structure is the fact that all of our rooms on the ambulatory side have doors leading out to the grounds. This makes it easy for the people to sit outside when the weather is nice or to go for a walk without having to go through other parts of the building. When I saw this on the blueprints, I wondered to what extent it would be a management problem. Actually, it has not proved that at all. It is necessary, however, to transfer to the other side those residents who have a tendency to wander off by themselves.

In caring for the medical needs of our people we have found that we have had to almost triple the size of our nursing staff, even though our population increased only about a third in the past three years. Because medications are so important in the treatment program, the position of the nurses' station must be carefully planned. Ours is in the center of the building, nearer to the ambulatory wing than to the infirmary side. We have an intercom and lighting system which provides for communication between the residents and the nurses in the station. Some of our nursing staff feel that it would have been better to have placed the nurses' station in the infirmary wing.

Louis Newmark
Executive Director
The Jewish Home
Atlanta, Georgia



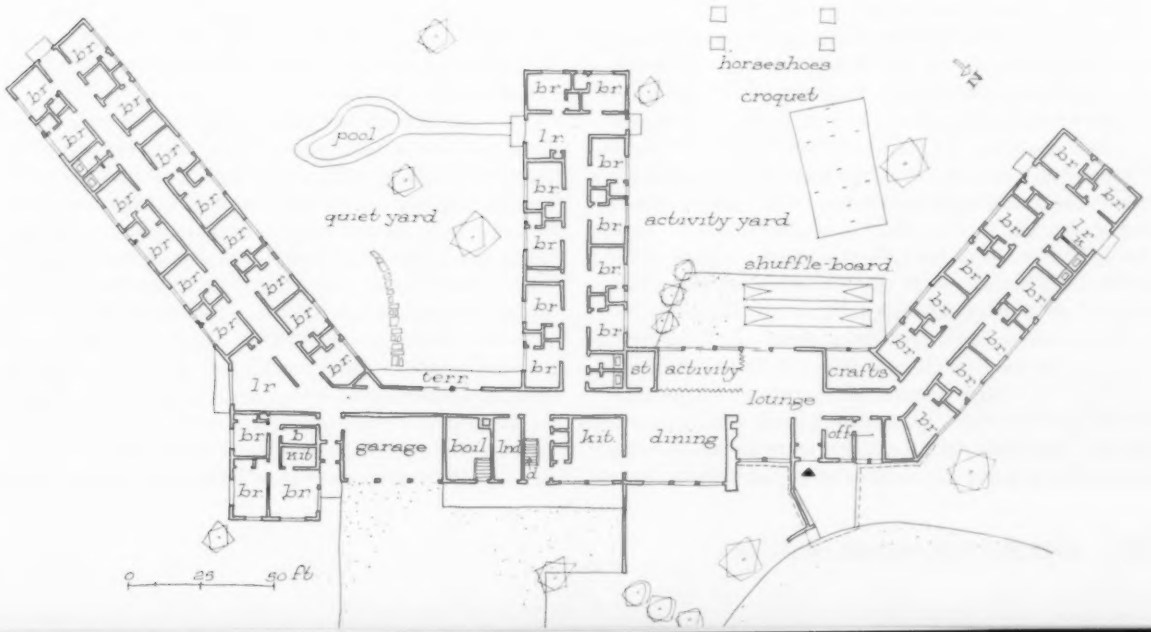


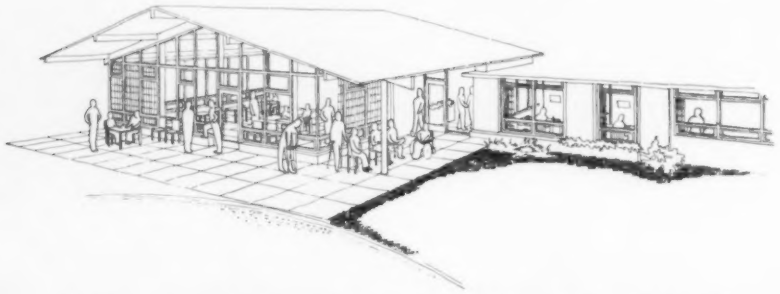
COLORADO BAPTIST HOME FOR THE AGED

Canon City, Col.

Harold R. Carver, Architect

This home was designed around the idea that residential character was essential. Thus the three separate wings create smaller "communities" within the home, the wings being oriented for maximum view and warmth to each room. The splayed form helps provide privacy to each wing, also to form courtyards. Each wing houses 10 residents in normal occupancy. The architect writes: "It is recognized that need for chronic care will occur rapidly . . . next unit will be a completely separated chronic hospital."





PLANNING THE NURSING HOME

U. S. Department of Health, Education and Welfare

MEDICAL CARE programs for the management of patients with chronic disabilities and long-term illness are directed toward restoring them to a state of optimum usefulness to themselves and to society. Although the availability of therapeutic facilities in the community is essential to medical care programs for many chronically ill patients, continued hospitalization in institutions that furnish highly specialized expensive care is not required in most cases. Yet such patients often require more care than can properly be given in their homes.

The nursing home is a type of facility which is emerging to serve this group. Based on present trends and the forecast for the future in the chain of medical care services, the primary purpose of the nursing home is to provide skilled nursing care for patients with chronic disabilities or long-term illness when hospitalization and intensive medical care are not indicated.

A definition of a nursing home which has had rather general acceptance is as follows:

> A nursing home is a facility for the accommodation of convalescents or other persons who are not acutely ill and not in need of hospital care but who require skilled nursing care and related medical services.

In addition to coping with the medical aspects of long term care, the nursing home must be prepared to help the patient to meet his problems in a way which preserves his right to maximum self-determination, privacy of person, and personal dignity. Thoughtful planning is required to provide the necessary facilities, properly arranged, to carry out the complete programs of nursing homes as well as to safeguard the individuality and basic rights of the patients.

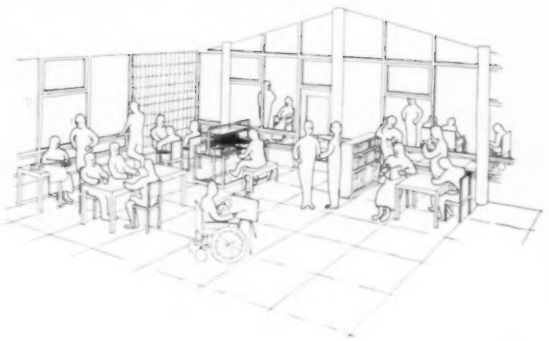
Unlike most patients in general hospitals, the patients in nursing homes are predominately long-term residents. They have left their homes for an extended period of treatment and to all intents and purposes have moved to a new home usually for a substantial period of time. The nursing home must not only supply the necessary medical and nursing care directed to the improvement and maintenance of health, but must be able to meet the patients' needs for affection, emotional security, social contacts, recreation, spiritual devotion, education, rehabilitation and congenial work or creative activities.

Homes with capacities of 25 to 50 beds are considered to be of the most practicable size. This range has advantages from the administrative viewpoint in that small units are easier to operate to give individualized service. Also provision of small nursing homes in rural communities serves to restrict the size of the area from which patients are drawn, which will make visiting convenient and help the integration of the patient in community activities. Some larger homes will probably be required in areas of concentrated population. Regardless of the size initially selected, consideration should be given to the possible need for future expansion.

It is recommended that nursing homes be of only one story unless they are to be so large, or the site is so small, as to make this impractical. Several advantages are inherent in the use of the one-story scheme. Stairways and elevators are eliminated, the movement of patients, staff equipment and supplies from one part of the building to another is considerably eased, direct access from indoors to outdoors is easier and the danger from fires is considerably reduced. An informal, domestic character is much more readily achieved in a one-story building, and finally, one-story buildings generally lend themselves more readily to future expansion than multi-story buildings. (The planning requirements developed in this paper will apply, of course, to multi-story buildings also.) A ceiling height of 8 ft. 0 in. is generally considered to be minimum in patient areas.

It should be possible to minimize institutional character in nursing homes through open informal planning taking advantage of natural light, air, outlook and outdoor activities, and through the provision of generous areas for patients' living and recreation. Color, decoration, harmonious furnishings and landscaping, thoughtfully used, can be most valuable in achieving informality. Soundproofing, acoustical treatment, light and temperature control, agreeable lighting, comfortable furniture, and other amenities relating to the patients' physical comfort should be installed. In the larger facilities, provision of barber and beauty shop should be considered.

The use of wide corridors, introduction of natural light to corridors where possible, keeping corridor lengths short and eliminating dark or congested areas are all desirable. It is not considered necessary, as is the case in general hospitals, to keep visitors' and patients' areas and traffic isolated and to exclude patients from so many areas of the buildings. Since the idea is to make the patient feel at home, he should feel free to meet his visitors where he likes, to mix at will with other patients and the visiting public, or at least to observe without restriction their coming and going. He should be allowed the freedom of the building or grounds as long as it does not interfere with the actual well-being of himself or other patients, or seriously detract from



Public Health Service, Division of Hospital and Medical Facilities

the efficiency of the operation of the nursing home.

It is important that the window sills in areas used by patients be low enough so that the view of the patient in the wheel chair is not interfered with.

Ancillary Facilities

The medical care program of nursing homes should keep pace with advances in medical science. The extent of facilities for these services will vary widely depending upon the administrative policy, affiliation with the hospital and other medical services in the community and the size of the nursing home.

A minimum of one multi-purpose consultation room should be provided. This room would be used by physicians for consultation with patients, nursing staff and relatives of patients. It may also be used by the nursing staff, visiting medical specialists, social workers, clergy and volunteers.

Physical therapy is an essential service in the treatment of some types of long-term illness and disabilities. As a minimum, massage, thermotherapy and hydrotherapy treatments may be given in the medical treatment room. This limited type of program would require a mobile arm, leg and hip therapy tank, infrared lamp, and other thermotherapy equipment as required by the program. A generous storage closet located adjacent to the treatment room should be provided for the storage of this equipment when not in use.

The patients' rooms, corridors and one of the day rooms may be used for physical therapy exercises. The day room which is used for physical therapy exercises may be provided with parallel bars (folding type 7 ft long), recessed in the wall so that they may be concealed when not in use. A mirror should be secured to the wall between the bars. An additional wall mirror would be desirable. Wall space and anchors may be provided for a shoulder wheel, shoulder ladder and pulley weights. An anchor in the ceiling may also be provided to secure a sayre head sling. A closet located adjacent to the day room for storage of equipment is desirable.

Occupational therapy of a functional nature is also essential in the treatment of some types of disabilities and important as recreational therapy for long-term patients. As a minimum, the patients' rooms, day rooms, and recreation room may be used for this type of therapy. Specialized major pieces of equipment would not be required for this kind of program.

The *recreation room* should be as centrally located as possible with respect to the patients' bedrooms. Location near the lobby would be convenient for those patients who would enjoy viewing the activities in and around the main entrance. It would also be convenient for visitors and in many cases for supervision of the nurses' station. The recreation room should be ample in scale, well lighted and decorated, and arranged to serve the recreational and occupational needs of the various patients. It should also be convertible to use for religious services. It should look out on scenes of interest and activity and, if possible, have direct controlled access to outdoor recreational areas. An additional, smaller room would be desirable for those patients who like a less active environment than that found in the main recreation room. Cabinets and shelves for the storage of games, books, magazines should be provided.

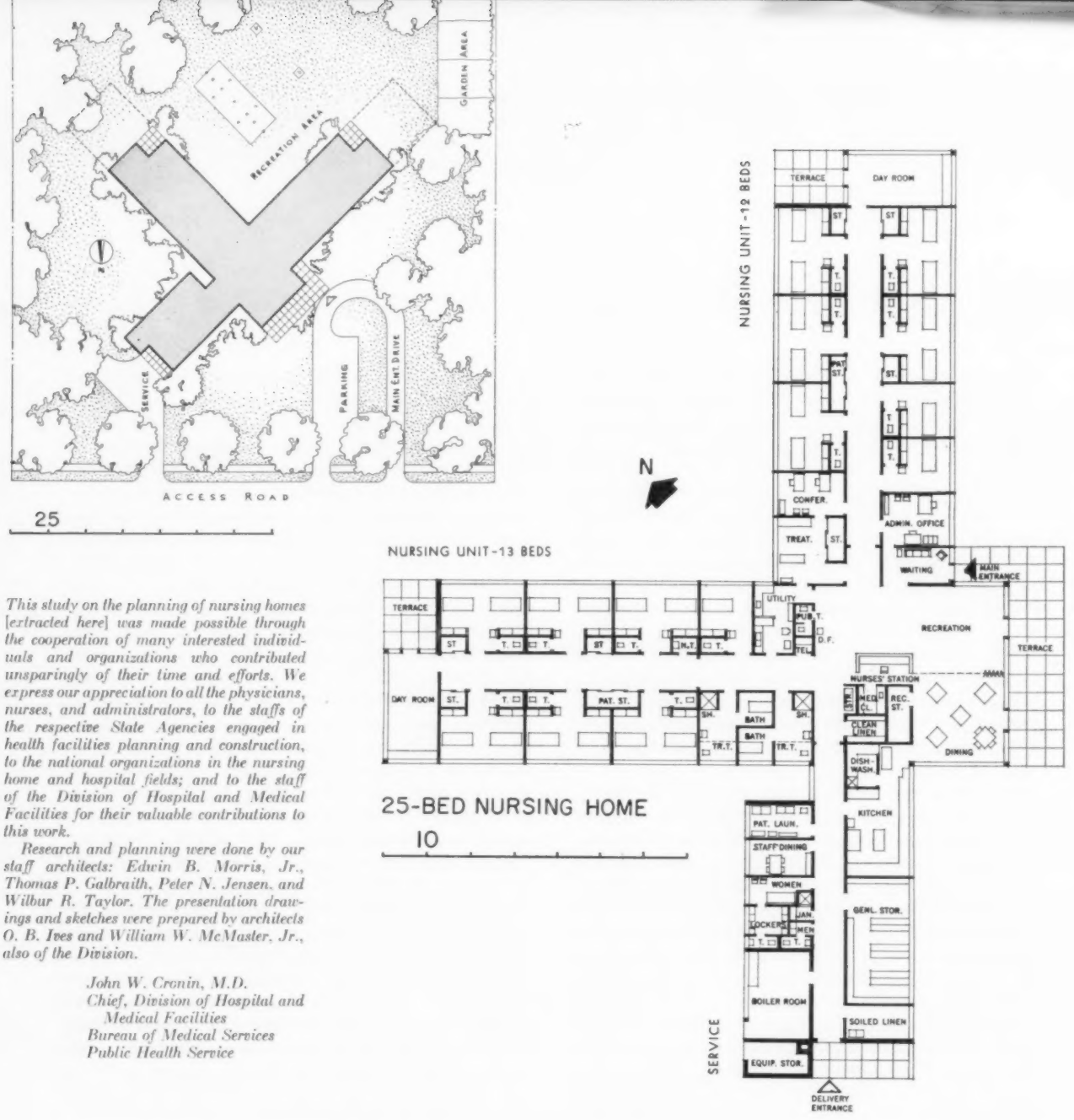
It is recommended that the *dining space* for patients be located adjacent to the recreation room and separated by a folding partition. Dining space should be provided at the rate of 25 sq ft per bed for 75 per cent of the total number of beds. Provision of 25 sq ft per person is considered minimal for this type of patient. The nursing home program should reflect its attitude toward the use of the dining area. For example, if the best use of this space is to be made, patients will be encouraged to eat in the dining room as regularly as possible for reasons of companionship. The dining area can also be used for serving in-between-meal nourishments or afternoon tea to enhance the homelike atmosphere. If it is adjacent to the recreation room and separated by folding partitions, it can also be used for large group meetings such as chapel service, movies, or speakers.

A staff dining room should be provided. Staff members, because they are in constant contact with their patients in a nursing home will benefit from having a quiet place of their own to eat their meals. They will eat in shifts and therefore the seating capacity need not provide for the entire staff.

The total area for recreation, occupational activities and dining should not be less than 50 sq ft per bed for 75 per cent of the bed count.

The *nursing unit* should be located conveniently for effective patient care and supervision by the nursing staff, ease of service from kitchen and storage areas, facility of movement between bedrooms and recreational areas and for patients' visitors.

The optimum size for a nursing unit in a nursing home, like that in a hospital, is about 25 to 30 beds. Forty beds are felt to be a maximum unless additional service facilities are provided. Consideration of factors



This study on the planning of nursing homes [extracted here] was made possible through the cooperation of many interested individuals and organizations who contributed unsparingly of their time and efforts. We express our appreciation to all the physicians, nurses, and administrators, to the staffs of the respective State Agencies engaged in health facilities planning and construction, to the national organizations in the nursing home and hospital fields; and to the staff of the Division of Hospital and Medical Facilities for their valuable contributions to this work.

Research and planning were done by our staff architects: Edwin B. Morris, Jr., Thomas P. Galbraith, Peter N. Jensen, and Wilbur R. Taylor. The presentation drawings and sketches were prepared by architects O. B. Ives and William W. McMaster, Jr., also of the Division.

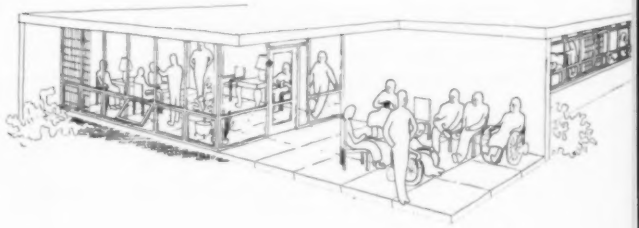
John W. Cronin, M.D.
Chief, Division of Hospital and Medical Facilities
Bureau of Medical Services
Public Health Service

such as the type, sex and physical condition of patients, the number of patients that personnel can supervise and the length of the resulting nursing wing will determine the size of a nursing unit commensurate with the quality and quantity of service the nursing home should give. As in hospitals the distance of nurses' travel remains a critical factor in the efficiency of nursing care and should be kept as short as practicable.

It is the general feeling that patients' bedrooms should contain no more than two beds. Careful programming will determine individual home needs for an occasional bedroom for four. No ideal ratio of one-bed and two-bed rooms has been established. Two-bed rooms are adequate for the needs of most patients. However, one-bed rooms are needed for medical isolation and for personality problems and at least two single-bed rooms should be provided in each nursing unit. The ratio for individual projects will be determined by such factors as types of patients to be accommodated, local demand for private rooms based on the economic status of the community and the need for flexibility.

It would be desirable to have one of the single rooms finished to provide maximum security and safety for the occasional disoriented patient. The room should be acoustically treated, and structural projections, sharp corners and exposed piping should be avoided. Detention screens on the windows of this room are recommended.

Nurses' call, night lights and outlets should be provided in all bedrooms. Telephone jacks in patients'



rooms are desirable and should be included wherever economically feasible. Gas outlets should not be permitted.

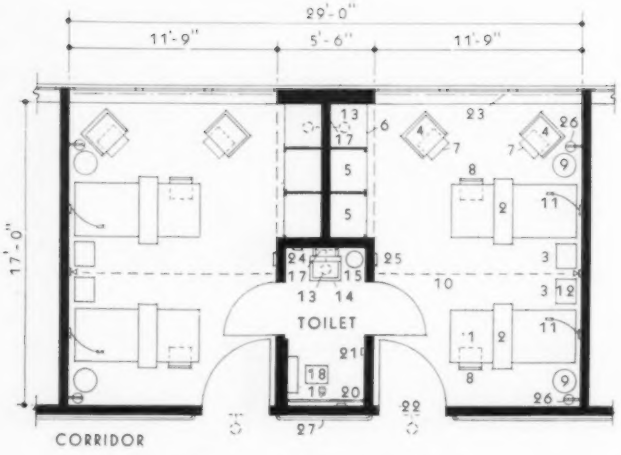
Minimum floor areas of 100 sq ft per bed in rooms with two or more beds and 125 sq ft in one-bed rooms should be provided. Beds should be placed at least 4 ft apart with a minimum 3 ft from adjacent walls, wardrobes or other fixtures. Doors to patients' rooms should be at least 3 ft 8 in. wide (3 ft 10 in. preferable) and should swing into the room.

It is desirable that all patients' beds be of the variable height type. Where cost prohibits, at least half should be variable height and the remainder of the standard convalescent bed height with Gatch springs.

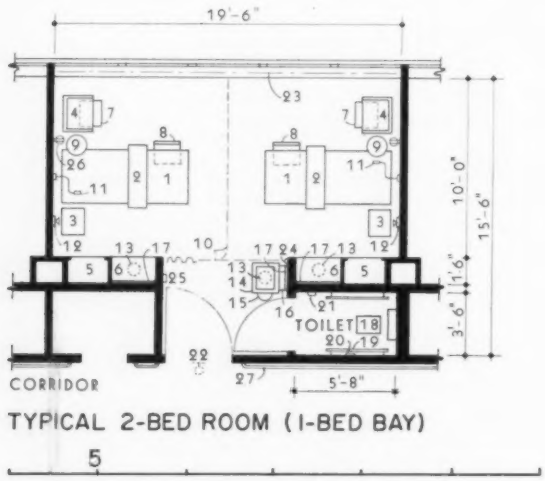
Each bedroom should have a lavatory to encourage self-care and personal hygiene and for convenient use by the nursing home staff in care and treatment of the patient.

Lavatories used by patients should be set out on wall brackets 6 ft from the wall, 2 ft 10 in. above the floor and be wall connected to increase accessibility by patients in wheel chairs. They should be furnished with gooseneck spouts. Mirrors should be placed directly over the lavatories but may be angled downward slightly for the convenience of wheel chair patients.

Nursing home patients are long-term, are often up and active, indoors and out, for at least part of the time and tend to accumulate more personal possessions. They need more clothing than most hospital patients. To provide for these items, ample storage space is required



TYPICAL 2-BED ROOM (2-BED BAY)



TYPICAL 2-BED ROOM (1-BED BAY)

5

LEGEND FOR TYPICAL BED ROOMS

1. High-low hospital bed
2. Over-bed table
3. Bedside table
4. Arm chair
5. Built-in locker
6. Built-in dresser
7. Ottoman
8. Straight chair
9. Floor lamp
10. Cubicle curtain
11. Nurses' calling station
12. Telephone outlet duplex receptacle and 1 phase, 3 wire, 20 amp. 125 V. receptacle
13. Wall bracket light, switch controlled
14. Lavatory with gooseneck spout and hot and cold water controls
15. Waste paper receptacle
16. Shelf
17. Mirror
18. Water closet with bed pan lugs and bedpan flushing attachment
19. Continuous grab bar
20. Paper holder
21. Nurses' calling station (push button type)
22. Corridor dome light
23. Sliding window curtain
24. Duplex receptacle
25. Night light, switch controlled
26. Duplex convenience outlet
27. Hand rail

in the bedrooms. Locker space should be a minimum of 30 in. wide and 18 in. deep per patient. Clothes rods and shelves should be adjustable for the convenience of wheel chair patients. Sliding doors with locks are desirable on lockers. Additional drawer and shelf space should also be provided.

The provision of toilets adjacent to each patient's bedroom is recommended for the convenience of both patients and staff. Adjacent toilets have therapeutic value and also save the time of the staff in the disposal of bedpans and urinals. For this purpose a bedpan flushing attachment should be installed at each water closet.

At least one toilet, arranged to facilitate the training of patients in manuevering from wheel chairs to water closets should be provided near the center of each nursing unit. Such toilets should be large enough (5 ft by 6 ft minimum) to accommodate wheel chairs and to provide room for staff members to instruct patients in proper techniques. Space is required in front and at least one side of the water closet for the movement of the wheel chair and instructor. If central toilet facilities are provided in the home, one or more of the water closets therein may be arranged for this function. Requirements for doors and kickplates are the same as for other toilets.

Central bath facilities should be located where most convenient to serve all patients. At least one bathtub and one shower for each sex should be provided for each nursing unit. Bathrooms should be large enough to permit maneuvering of patients in wheel chairs. Bathtubs should be set on the floor. It is recommended that the tub be accessible from both sides and one end for the convenience of both patients and staff.

Water at all fixtures which are used by patients should be thermostatically controlled to provide a temperature of not more than 110 degrees at the top.

Additional self-help equipment used for toilet and bathing activities such as seats, benches, tubs, mats, etc., is available commercially.

Emergency call buttons should be provided in all toilet and bathrooms.

Special devices and arrangements must be incorporated into the design of nursing homes because of the physical condition of the patients. Some patients will suffer from the ills and infirmities attendant upon old age, and others will have chronic ailments which limit or change their previous mode of living. The safety, comfort and convenience of these patients must be provided for.

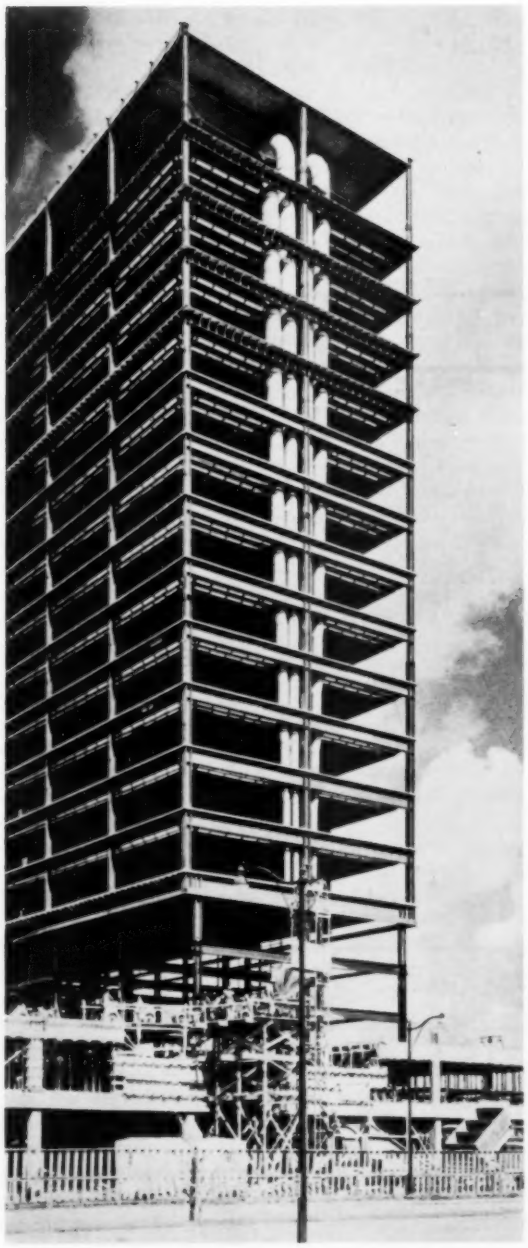
Because of their feebleness and infirmities, it is difficult to evacuate patients in nursing homes and the need for adequate fire prevention and fire protection measures [1] cannot be overstressed. These factors should be considered as important as those which contribute to their comfort and care.

[1] *For planning information on fire safety in nursing homes, see "Five Steps to Fire Safety" by Julian Smariga, Modern Hospital, May 1955.*

HIGH VELOCITY AIR CONDITIONING:

Its effect on building design

By C. Milton Wilson
Anemostat Corporation of America



High-velocity risers send conditioned air from air handling equipment on the tower floor to branch ducts on each floor. System is zoned, dual duct. Medical Tower Building, Houston, Texas. Golemon & Rolfe, Architects

AIR CONDITIONING engineers throughout the country are gradually changing their design criteria and many architects are capitalizing on this forward step. Increasing use of high velocity air distribution is reducing shafts and furring spaces and cutting down floor-to-floor heights without changing ceiling height, in effect providing greater flexibility of design and reducing building costs. In addition, improved comfort is being obtained with the use of high velocity systems which are more quiet and more easily adapted for individual room control.

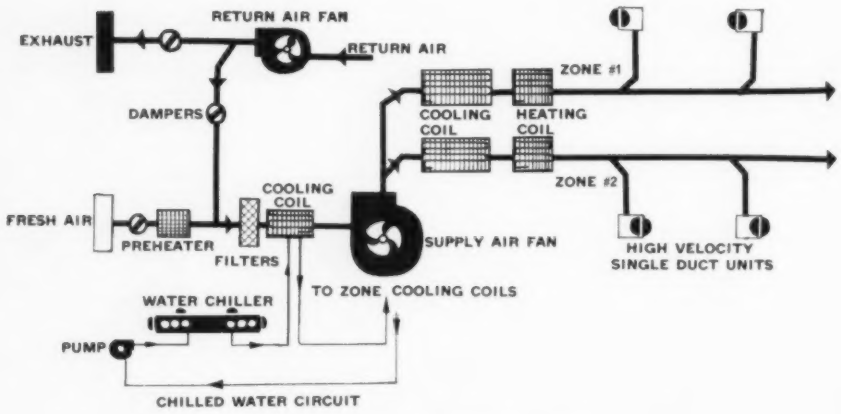
WHY HIGH VELOCITY?

Impetus toward improved design of air conditioning systems stems from three principal sources: economics, demand for individual room control, and the trend toward more quiet systems.

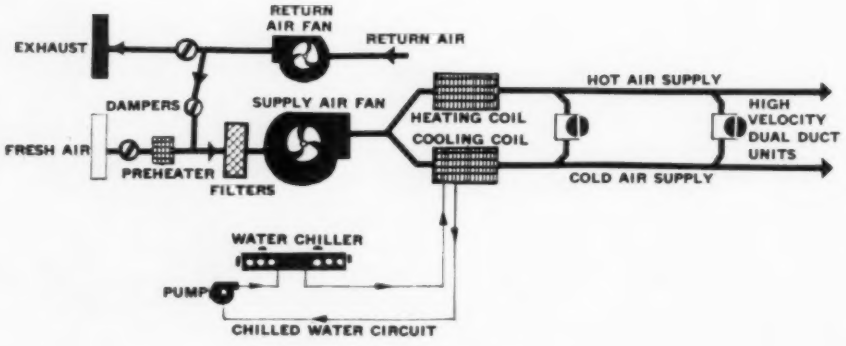
Economics. Since 1930 the cost per pound of air conditioning ducts has approximately tripled, and the cost per cubic foot of building space has followed a similar pattern. Architects and their clients are intensely interested in mechanical systems which accomplish design objectives but use a minimum amount of costly space. Other factors which focus attention on the problem are the use of larger windows and plate glass walls and the increased intensity of electrical illumination. These introduce substantial heat loads which must be counteracted by the air cooling systems. The increased thermal requirements, which require larger, higher capacity air conditioning systems and the increased cost of space to enclose the mechanical components of the system, especially the air distribution ducts, are the principal economic factors to be balanced. They justify the trend in large buildings to use some type of high velocity air distribution.

Economic analysis of an air conditioning system is an extremely complicated problem which is replete with important variables such as the size of the system, controls, type of occupancy, construction details, temperature differentials, geographic location and others. Furthermore, the analysis, to be logical, must be made on the basis of "owning and operating" because operating costs vary as well as the capital investment and its amortization.

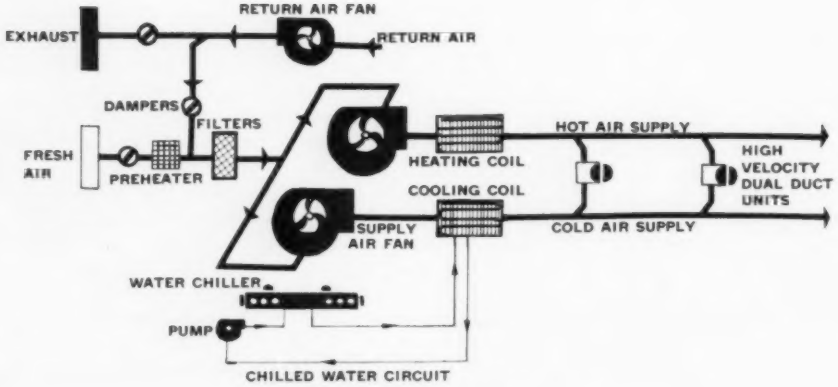
At a recent meeting of the American Society of Heating and Air Conditioning Engineers, Mr. John Everetts, Jr.



SINGLE DUCT ZONED SYSTEM



DUAL DUCT, ONE-FAN SYSTEM



DUAL DUCT, TWO-FAN SYSTEM

presented an analysis which showed that in office building construction, the high velocity system becomes less expensive to operate and own when the building construction cost exceeded two dollars per cubic foot. However, it is reasonable to expect this figure will be reduced because high velocity equipment is now being mass produced at lower costs and contractors are becoming more efficient in their installation methods. If other variables, such as individual room control and low sound level systems, are incorporated in the economic analysis, then the high velocity system is more economical than the low velocity type regardless of the cost per cubic foot of building construction.

In general, architects have estimated that in tall buildings the use of high velocity air conditioning systems allows floor heights to be reduced 8 to 10 in. without reducing ceiling height. This means approximately one floor of net rental space can be added for every 14 floors of construction without increasing the building height. Vertical shafts are reduced on an average of 25 per cent and the average percentage saving in metal is also 25 per cent or more as compared to low velocity systems.

Space in a building can be saved by increasing the temperature differential of the cooling air as well as increasing the velocity. For example, if the temperature differential of the cooling air is increased from 20 to 30 F, the area of all the supply ducts is reduced by one-third. Newly developed induction type diffusers can introduce air into a room at 30 degrees below ambient temperature without discomfort.

Demand for individual room control. Individual room control during both the heating and cooling seasons has become an important requirement. There are broad differences in the temperature preferences of people as well as in temperature and humidity requirements in various parts of the same building. Individual room control is extremely expensive and difficult to obtain in a conventional low velocity system. However, it can be easily accomplished with a high velocity system and without excessive costs or elaborate equipment.

Trend toward quiet systems. Although low velocity systems can be designed to operate quietly, they frequently become cumbersome and expensive. Velocities must be kept unusually low requiring large ducts and branches. Strategically located volume

controls and large quantities of sound absorbing materials must be installed in the ducts. In high velocity systems, factory made and calibrated sound attenuators are used, which can be selected to provide sound levels properly suited to the type of occupancy.

BASIC SYSTEM DESIGN

Although the distribution and control of high velocity air is a complex technical problem, engineers now have the situation well in hand and practically all large new buildings are being designed with the air conditioning system designed for high velocity distribution.

To illustrate the opportunities open to the architect a brief survey of the principles of high velocity will be presented along with examples of various types of buildings where high velocity distribution has proved to be especially well adapted to the particular problems.

The basic high velocity systems are the single duct, zone control system; the dual duct, single-fan system and the dual duct, two-fan system.

Single duct zone control system. This is the most elementary type of system, and it is also the least expensive to install. In medium-size and small buildings this system can do an excellent zone control job. This system can be used also with individual manual or automatic controls which depend on volume control in the individual spaces. Because of the pressure in the air supply ducts, volume control can be used on high velocity systems without the serious unbalance problem which volume control causes in low velocity systems. The changeover from winter to summer conditions is more difficult than with dual duct systems because special summer-winter thermostats are required, and the air temperature may have to be shifted from hot to cold and vice versa until the season has stabilized. However, the automatic controls which are available today have simplified this problem.

Dual duct single-fan system. This is the most commonly used high velocity air distribution system. The thermodynamic principles of this system are not new, and it has always been considered excellent by engineers. With the advent of high velocity equipment the interest has been renewed with great vigor. The system is ideal for comfort conditioning where individual room control is a requirement. Individual control of temperature is feasible without an appreciable change in the volume of air supplied to the room.

Dual duct two-fan system. This type of system is an interesting variation of the dual duct single fan system. When properly controlled, this system will show a slightly lower operating cost than other high velocity systems. The problem of "static unbalance" in this system is inherent, and, therefore, it is expensive to install. (Static unbalance is the condition of pressure variations at the units caused by variable flow in the two ducts of the dual duct system.) Numerous special control devices are necessary at the attenuator diffuser units.

BUILDING TYPES

Hospitals. It is now possible to "climatize" a hospital with room conditions which are most suitable to the healing and comfort of the various types of patients. Within the same hospital, various "climates" are reproduced for special conditions: operating rooms can be provided with humidity control to minimize the chance of an explosion of the anesthesia gases; infants' wards are provided with air most suitable for their well-being.

Low-cost hospital air conditioning is exemplified by the Vandalia Hospital in Vandalia, Ill. This is a single duct high velocity design with a manual control in each room and a simple corridor distribution system. Since double-glazed windows were used, the corridor type distribution and 100 per cent induction diffusers were satisfactory for both the heating and cooling cycles. The manual volume control provides means for adjusting the room temperature to suit the requirements of the various patients.

More accurate room control can be obtained by using the dual duct under-the-window type induction system. This system assures accurate automatically controlled temperature and at the same time maintains practically constant air volume. With the all-air system no coils, fans or drains are necessary and all induction or high aspiration effects take place on the inside and outside of the diffuser. No dirt deposits can be accumulated as the high velocity air acts as jets to keep the induction spaces and diffusers "swept clean."

The dual duct system can be used to supply groups of operating rooms where humidity control is extremely important. If a group of operating rooms is supplied from one coil and fan unit, the dewpoint control can be applied to a coil of a draw-through system with a reheat coil in the hot duct. If high humidity rooms are supplied off the general system, spray type humidifiers can be placed after the high velocity attenuators, ahead of the diffusers, and controlled by humidistats in the rooms.

Schools. Architects and engineers are constantly striving to reduce the cost of school heating and ventilation systems and to minimize the cost and problems of maintenance. When high velocity systems are installed, all the air is handled by large, efficient fans and filters located in the main equipment room and distributed through small ducts to scientifically designed sound attenuators and diffusers. The ducts can be buried in the floor, run in corridor ceilings or under sun roofs, or furred in with columns.

High velocity air conditioning for schools offers the following advantages:

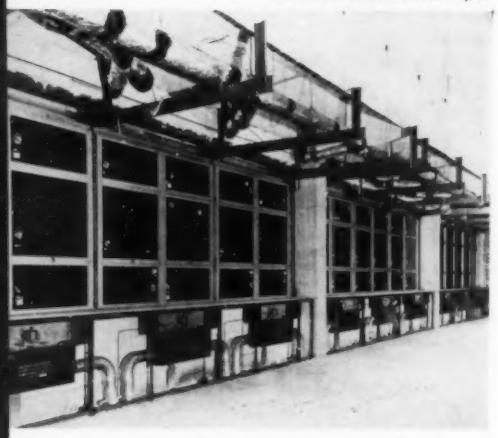
1. No openings with expensive flashings are required through the outside walls of the buildings. The elimination of the grilles unquestionably improves the external appearance of the school. In high velocity systems, fresh air is brought into the building through one large louvered opening at the fan room.

2. No trenches are required for steam, condensate or water piping. When air ducts are run under the floor they can be made of tile, pipe or fiber tubes. With the trend to one story and campus type buildings the underground high velocity system can be used to warm the slabs near the windows to eliminate the "edge" cooling there.

3. Some schools are now being designed for twelve months' operation or at least for future operation on an all-year-round schedule. In the southwest great emphasis is being placed on good ventilation with or without evaporative or mechanical cooling. The all-air high velocity school system is easily adapted to satisfy the condition which year round operation requires. An upstate New York school board has set up a specification for a new high school requiring year round operation and easily installed future air conditioning. The consulting engineer, after studying all methods, is now designing for this school a dual duct high velocity system. Space will be provided in the fan plenums for the future installation of cooling coils, and equipment space is being set aside to house the refrigeration machines.

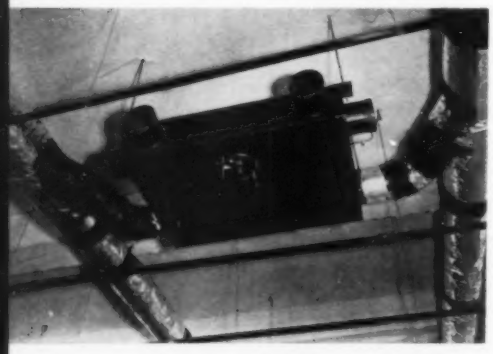
4. High velocity systems are quiet because the fan and motors are not located in the classrooms.

Architects: Phelps & Dewees & Simmons and Atlee B. & Robert M. Ayres



Under-the-window high velocity units are fed from a dual-duct system in the USAA Building in San Antonio. Note ducts at top of photo which run to the floor above

Low sill heights on the bottom floors made it necessary to install velocity-sound attenuators under the ceiling for serving outlets set on the floor above



High velocity unit for velocity-sound attenuation has standard diffuser outlet in center plus four capped outlets for future flexible hose connections

5. No piping for hot water or steam and return is required and problems of freezing, corrosion, and "unvented air" are eliminated.

Office Buildings. High velocity air distribution systems are now being used in low buildings as well as multi-story buildings up to the skyscraper class. High lighting loads and the interest in individual room control requires large, controlled quantities of cooled air which is supplied directly to the occupied spaces or which is partially induced through secondary coils supplied by cooled or heated water.

In office buildings, the air distribution system is divided into exterior and interior zones. The interior zones are relatively easy to control as they are not affected by solar radiation. The exterior zones, especially those affected by direct sunlight, require sensitive controls with positive and rapid response of the cooling system. When large glass areas are used, the solar load requires additional cooling. Here a solution to the space problem is high velocity air and the maximum practical temperature differential. It must be remembered that the sensible cooling effect in a space is a function not only of the quantity of the supply air but also its temperature. The duct space either in the shafts or hung ceiling spaces is decreased in direct proportion to the increase in the air velocity and the temperature differential below the ambient room temperature.

A number of variations have been developed for office building applications, for both the interior and exterior zones.

Interior Zones — The octopus. The "octopus" design, which is a feature of several New York office buildings, provides great flexibility when used with ceilings constructed of removable acoustical panels. High velocity air is brought to a sound attenuator volume control unit which has two to four outlets. The air is carried, at reduced velocities, from the valve-attenuator combination through flexible hose to supply diffusers, which are made with the same outer dimensions as the acoustical panels. If and when the space is subdivided or rearranged to suit tenant requirements, the ceiling panels and diffusers can be shifted to accommodate the tenant's preferences without shifting metal ducts, thereby obviating expensive alterations.

Attenuator boxes for this unit can be supplied with air from a dual duct system with a thermostat controlling one bay of a building. They can also be supplied with air from a single duct system with automatic or manual control, or they can be supplied from a turbulator system.

The turbulator system. Essentially, the advantage of this system lies in the simplicity of control and the instantaneous mixing action to obtain a quick response and adjustment of the system to temperature changes. Turbulator systems are basically a new concept of an interior zone control which eliminates practically all the fan rooms on the intermediate floors of a building and the coil and piping systems which were formerly used to obtain the reheat control. Before this innovation, interior fan rooms were located throughout the building with one fan room usually serving three floors. These required fresh air intakes and a lot of cooling and heating coils and used expensive rental space. The high velocity turbulator technique eliminates most of these fan rooms as more than twelve floors can be serviced from one main fan room feeding up or down to the various floors, each of which is controlled by one or more turbulators depending on the zoning arrangement.

In a typical turbulator arrangement, air is carried upward or downward in two high velocity ducts. One duct carries cold air and the other carries warm air. The temperature of the air to be carried in the hot duct and the reheat load determine to a large extent the size of that particular duct. It can be noted that a turbulator is installed at each interior zone. The number of zones per floor depends, of course, upon the size of the building and the degree of zoning desired. A thermostat in the return air duct or averaging thermostats actuate the dampers on the hot and cold ducts at the turbulator.

Turbulators differ from standard dual duct attenuator-diffuser combinations in size and capacity and basic function. Dual duct attenuators seldom handle more than 1000 cfm and maintain predetermined temperature. Turbulators are built up to 15,000 cfm in capacity and although they control temperature they do not reduce velocity and do not have sound attenuating characteristics. Diffusers on turbulator systems must be provided with sound attenuating devices.

This system has additional flexibility which allows individual control of interior spaces when required. The turbulators can be by-passed and dual duct systems can be run wherever more accurate control is required. For example,

an interior meeting or board room does not have to be zoned into the turbulator system — it can be handled by dual duct units as individual "small zones."

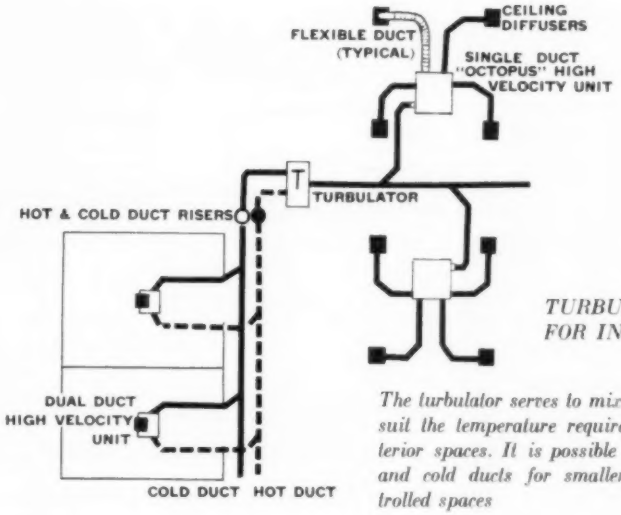
Exterior Zones. The problem of air distribution to maintain comfortable conditions during all seasons has increased in importance with increasing use of glass and skin type construction. Large and fluctuating solar loads must be rapidly compensated for by the air conditioning system. The flexibility and rapid mixing characteristics of the high velocity system can be applied to solve these problems in various ways depending on the accuracy of control required and the space conditions. Several practical schemes are described below.

Under-the-window units. For both heating and cooling, especially where heating is important, the under-the-window unit, in one of its various forms and with flexible controls, can do an excellent job. The units can be installed with either a vertical, top or slanting discharge. The units can be dual duct, single duct with automatic or manual control or zone control. The thermostats can be integral on the unit or they can be located on walls or columns in the occupied space. These units can be designed at extremely low noise ratings.

Combination units. In this system, which is proving economical for certain types of buildings, a single temperature controlled attenuator is installed in the ceiling of the occupied space and two or more induction units are supplied. Although this system is less flexible than a series of individual units, there is a substantial savings on controls and the system has special merit where very low sill heights are required.

Side wall units. In many installations high velocity units can be installed in interior walls to air condition the exterior zone. This method has been used successfully in hospitals, hotels, and office buildings. The type of units generally used are of the straight line 100 per cent induction type in conjunction with dual or single duct systems and with automatic or manual controls. This method is extremely economical for air conditioning existing hotels. Small high velocity ducts are run down corridors with the units set in transoms or in soffits near the bathroom.

When installations of this type are used for heating in cold climates, under-the-window returns should be installed or supplementary radiation provided at the windows. In moderate climates, returns and radiation can be omitted if double glazing is used. In warmer climates, neither double glazing, under-the-window returns or supplementary radiation are required.



TURBULATOR SYSTEM FOR INTERIOR ZONES

The turbulator serves to mix cold and hot air to suit the temperature requirements of large interior spaces. It is possible also to use the hot and cold ducts for smaller individually controlled spaces

Hotels. The present trend toward 100 per cent air conditioning of hotels points up the advantages of high velocity air distribution for older buildings. Practically all new hotels are air conditioned, and managements of existing hotels are investigating the potential of high velocity for installation in buildings 20 or more years old. The small amount of waste space in guest room areas made 100 per cent air conditioning virtually impossible with conventional low-velocity systems. High velocity systems are being increasingly used for the following reasons:

1. The ducts are small and require a minimum of cutting and patching.

2. The work can be done quickly to minimize guest discomfort.

3. Properly designed high velocity systems are much more quiet than unit air conditioners of the window-box type and do not affect the external or internal appearance of the building.

4. The units in the rooms require practically no maintenance. There are no moving parts in the units such as fans or motors, and nothing to be cleaned such as coils, filters or drains. Although under-the-window units are being used in new hotels in the colder climates, this type of installation is expensive and difficult to install in existing structures. Furthermore, it often is not logical to rip out an existing heating system, but it does make sense to install a supplementary air system for the air conditioning.

The least expensive system to install is the single duct system. The side wall diffusers are supplied from ducts furred into the corridor ceilings. Vertical distribution can also be used with ducts run through closets.

Individual room temperature control is a necessity for hotels. This can be accomplished by any one of three methods, depending on the quality of control required. The first and best is a dual duct system with a thermostat which automatically controls a regulator at the valves in the attenuator. This type is considered the best because the room temperature is accurately maintained without a change in the quantity of air supplied.

Another type is the single duct automatic control system. This is an effective system but is based on volume control rather than mixing as is done by dual duct systems. However, the system is less expensive and the quality of the control is generally adequate.

A third type of control is the single duct system with remote manual controls. This system depends essentially on the zoning for basic control, but allows the guest in an individual room to vary the quantity of air supplied to his room to "trim" the system to his satisfaction. This is an extremely simple system to install and maintain. The manual remote controls can be installed for approximately one-fourth the cost of automatic controls.

EQUIPMENT DEVELOPMENT

High velocity systems, especially those employing high-temperature differential, are rapidly gaining engineering and architectural acceptance because they are fundamentally sound and satisfy the economic pattern of modern architecture. Most important, engineers have obtained experience in the design of systems to assure value and comfort for their clients.

CLOSED-CIRCUIT TELEVISION

By Skipwith W. Athey
General Precision Laboratory Incorporated

The concept of closed-circuit television is widely understood. Not as familiar, though, are the various types of equipment necessary and their physical and electrical characteristics. At a minimum, the architect will need to know what sort of room conditions and wiring are required. Even more than this, after becoming acquainted with the potentialities of the medium, he will want to consider what effects it could have on space planning

TELEVISION — so much part of today's American home scene — is rapidly acquiring equal familiarity with industrial and institutional surroundings via the Topsy-like growth of its sister-system known as "closed-circuit." A clear understanding of what is meant by closed-circuit industrial and institutional television and how it is used should be acquired before specific problems of the medium are approached.

Closed-circuit television differs from broadcast television in much the same way that a telephone circuit differs from broadcast radio. In the closed-circuit system, pictures can be viewed only by persons with reception equipment linked to the specific closed television circuit. Typical installations may provide visual communication between a few rooms within a single building, or may stretch from building to building, even across the country.

Applications. In addition to making visual communication as easy as the telephone makes verbal communication, the system provides a positive, accurate way of *monitoring and controlling processes and machines.* In *surveillance applications* it can show instantaneously and continuously what is happening nearby, in remote areas, or places too confined for human observation. It also permits the *watching and controlling of dangerous operations* step-by-step — safe from extreme heat, fumes or radiation. From these facts, it is easily seen how the unique capabilities of the closed-circuit medium fit into such diversified fields as industrial plants, hospitals, schools, banks, penal institutions and the like.

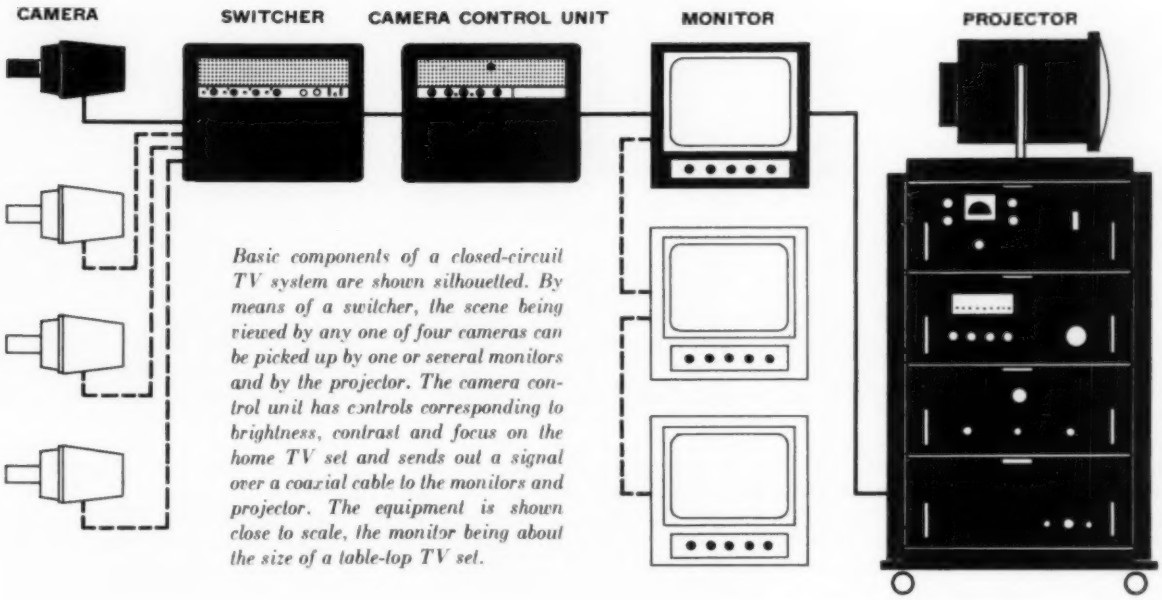
The architect will be concerned with closed-circuit industrial and institutional television (called from hereon, ITV) in two broad ways. He will be required first to provide for the physical installation of the elements of an ITV system to satisfy the requirements stated by a client. His concern here is with arranging for cable ducts, electric supply, ventilation, a clear sight from camera to object, adequate illumination on the subject and similar details. His second concern, larger in scope, will be with the possibility in some cases of a new approach to the use of space because ITV gives an opportunity for visual contact between locations not physically adjacent.

Basic Components. From the point of view of installation, the basic requirements of the ITV equipment are simple. Every ITV system consists of at least (1) a camera, (2) a camera control unit (sometimes called camera auxiliary unit), and (3) a monitor. The camera is usually about the size of a loaf of bread, but varies widely in shape from manufacturer to manufacturer.

The function of the camera is to do the actual observation and to convert the picture into electrical signals. To keep the camera small, a minimum of electronic parts are included in its case, while the remainder of necessary elements are placed in the camera control unit. The camera control unit supplies necessary electrical signals to the camera and processes the signal received from the camera into the final form needed for transmission to the monitoring point. It is equipped with controls which correspond roughly to the brightness, contrast (or "picture") and focus knobs of the home television set. "Monitor" is television jargon for the device containing the viewing screen. The camera control unit compares generally in size with an overnight bag, although sometimes it is absorbed into the monitor unit.

The monitor may be (1) a home television receiver of almost any screen size up to 27 in., (2) a commercial monitor unit with performance, ruggedness and reliability superior to that of the home receiver but of much the same size, or (3) a relatively small unit merged with the camera control.

For classroom, lecture, sales meeting, large-scale demonstration, or similar use, a projection television system may be used for monitoring. This is a device which projects a greatly enlarged picture onto a screen which may vary in size from 4½ by 6 ft to 15 by 20 ft. An angle up to seven degrees can exist between the optical axis of the projector barrel and the normal to the screen before the image becomes affected. If the tilt angle must be greater, the screen itself may be tipped to compensate. Even larger projection sets capable of producing picture sizes suitable for theatre screens are available, but are considerably larger and more difficult to install.



Basic components of a closed-circuit TV system are shown silhouetted. By means of a switcher, the scene being viewed by any one of four cameras can be picked up by one or several monitors and by the projector. The camera control unit has controls corresponding to brightness, contrast and focus on the home TV set and sends out a signal over a coaxial cable to the monitors and projector. The equipment is shown close to scale, the monitor being about the size of a table-top TV set.

Camera, Monitor Installation. The standard ITV monitor can be observed in ordinary room light without much effect on the picture. Where tonal rendering is an important part of the seeing task or where the ambient illumination is very high, some sort of light baffling or shielding is required. The projection set almost invariably requires careful control of room light, particularly for larger screen sizes. The price of viewing by a large number of people is that the group be in a partially darkened room. New developments in optics will make this less of a factor in the future.

The camera requires that there be only enough light on the object viewed to suit normal human observation. However, it does need protection from rain, from temperatures below zero and above 125 F, from corrosive fumes and from extremely intense nuclear radiation. Simple accessory housings are available as stock items from most ITV manufacturers to give the necessary protection for most extreme conditions. The permanent camera control unit poses no unusual installation problems and a portable version allows complete flexibility. The monitor is placed or built-in at any location which could be occupied by a home television receiver. Special monitors or monitor housings must be used if the use is out-of-doors or in any extreme environment.

Wiring. Between the camera and the camera control unit a multi-conductor camera cable about $\frac{5}{8}$ in. in diameter is required. A coaxial cable about $\frac{1}{4}$ to $\frac{3}{8}$ in. in diameter is used between the camera control unit and any monitors. Both these special cables are somewhat more heat-sensitive than ordinary electric wiring because of the nature of the internal insulation. Ordinary 115 volt "wall plug" power of about 150 watts is necessary for the camera control unit (this includes the camera power), and about 200 watts for the average monitor.

In developing a system for transmitting ITV images over any considerable distance, several possibilities must be considered. The camera control unit may transmit a signal of such form as to operate only a monitor unit and not a TV receiver. From an engineering point of view this so-called "video" transmission is simplest and produces the best picture quality. It is, however, limited to a maximum transmission distance of between 500 and 1000 ft.

For longer distance transmission without boosting — up to a mile under certain conditions — the camera control unit can supply a signal similar to that normally broadcast by a commercial TV station, and which can be tuned in only by a TV receiver (not a simple monitor). The signal used here is not broadcast by the camera control unit, but rather is sent along a coaxial cable to TV receivers. This type of signal can also be boosted, but with inexpensive units such as are used for community TV installations and for "fringe area" reception on home receivers.

For transmission from several miles to several thousand miles, the common carrier facilities of the telephone company can be leased. Alternately, a microwave link can be used for distances up to 30 miles, or even more when conditions are favorable. A micro-wave link consists of a very short wave radio transmitter which sends a searchlight-like beam to a distant receiver. The microwave link works over line-of-sight only, but with suitable terrain this can reach up to 50 miles.

What the Camera "Sees." The seeing problem for an ITV installation is not complex. The camera must have an uninterrupted view of the object or area observed, and must include in its field of view only enough area to permit clear sight of the finest detail needed. The camera must not be bothered by lights or reflections shining in its "eye."

In ITV installations, the matter of the proper field of view requires more thought and planning than almost any other point. The nature of television is such that, although the home screen may appear to give pictures of adequate clearness for entertainment, a critical seeing task may be disappointingly handled by ITV. It is therefore necessary to limit the area the system is required to transmit. The ITV equipment manufacturer's applications engineer is the one best equipped to advise on the capabilities of TV for a particular job. He can indicate, for example, whether a single camera is sufficient to watch a certain industrial process, or whether

several cameras must look at limited portions of the process to give satisfactory results. He might suggest the use of some accessories with a single camera, as will be discussed below.

It should be noted that the distance from the object to the camera can be varied widely without affecting the size of the area transmitted. Lenses are available with a wide range of focal length. For example, a lens having 1-in. focal length will pick up an area about 45 by 60 in. at a distance of 10 ft. With a 6 in. lens, the same area will be picked up at 60 ft, and an area of about 7 by 10 in. at 10 ft.

Adapting System to Job Need. We have considered the simplest form of ITV system, a form which is nevertheless a powerful industrial and institutional tool. But every day, as suppliers of this equipment, we are asked if ITV can perform additional duties. Some of these can be done with the basic equipment, but others require more complex installations. Accessories are being developed every day to bring more and more unusual tasks within the abilities of the system.

The simplest "accessory" is not really an accessory — it is merely the addition of extra monitors. These monitors may run continuously so that persons at several locations can watch what one camera is viewing, or they may be switched on as needed. An example of this use is presently in service in a New York City bank. Each teller has a monitor at his station, while the camera and camera control unit are located with the records clerk at a central point. When a teller wants to check a signature or balance, he telephones the record clerk and turns on his monitor. The clerk locates the depositor's record card and places it in front of the ITV camera. The teller can then see a sample signature, current balance and other pertinent data. A bank with several widely scattered branches can thus centralize all depositor records.

If the reverse is desired, such as the viewing of many locations from a central point as for a guard system, a number of cameras can be linked by a "switcher" to a single camera control unit and the pictures relayed to one or more monitors. The camera switcher is a device of about the same size as the camera control unit, and usually has a limited number of input channels (up to four). More cameras can be switched by the cascading of additional switchers.

ITV systems have been suggested for uses where a general view and a close-up view of the same subject are desirable. This may be arranged by fitting one camera with a wide angle lens and another with a telephoto lens. It also may be solved with one camera equipped with a two-lens turret, a device which switches from one lens to another on the same camera. A further alternative is the use of a vari-focal lens which can be controlled remotely to operate all the way from a wide angle of view to a telephoto close-up, staying in focus the whole time.

Other applications require that the sensitivity of the camera be varied remotely, as in an outdoor surveillance operation which must operate under floodlights at night, and also in broad daylight. A remotely controlled lens iris, usually combined with remote lens focus takes care of this contingency.

In still other cases, it is desirable to change the field of view of the camera by remote control. Several pan (movement around a vertical axis) and tilt (movement around a horizontal axis) devices are available to accomplish this. The entire plant security system of one large new shopping center is being handled by a series of such units. A few cameras on pan and tilt mounts can survey every nook and corner of a large store, permitting a great reduction in the number of watchmen assigned to patrol duty.

Most of the accessories listed need a few watts of "wall plug" power (seldom over 200 watts) and interconnecting cables. As a general rule for remote operation a control cable must be run to the point to be controlled. Space for the swinging of a panning and tilting camera in any camera housing, and ventilation to dispose of the few watts dissipated in camera control units, switchers, and remote control units must be considered. (Much ITV equipment has its own internal ventilating system and can dissipate its own heat by radiation and surface convection cooling in ambient temperatures of 125 F or below.)

Certain application requirements tie into the needs of the ITV equipment itself. For example, in a psychiatric ward, the camera must be housed behind a "one way glass" window and space for a pan and tilt unit must be considered, although such space is of negligible importance when a camera is mounted out in the open in a factory. In a prison, the camera must be in a tamper-proof enclosure, yet preventive maintenance, tube checking, etc., must be possible. For explosive atmospheres, conduit for remote control of complex accessories may become a major problem because of the necessity of a complete seal of an explosion-proof housing.

New Approach to Space Planning. This, then, is a quick review of what the architect may expect to encounter in designing or remodelling a building which will contain an ITV system. Let us consider for a moment the other aspect of the problem, the possibility of the architect's taking a new approach to space planning because the ITV tool is at hand. Following are a few examples of current and suggested installations.

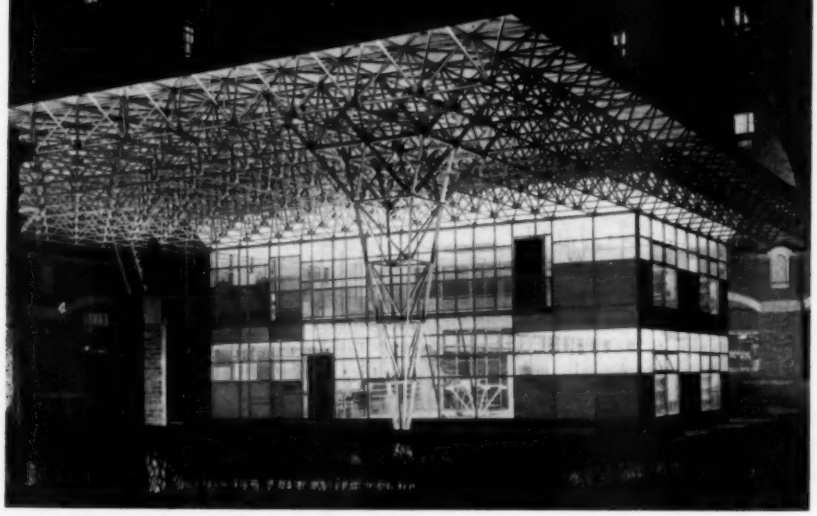
In schools and universities, lectures and demonstrations can be simultaneously transmitted to a number of class areas with a saving in facilities and lecturers' time.

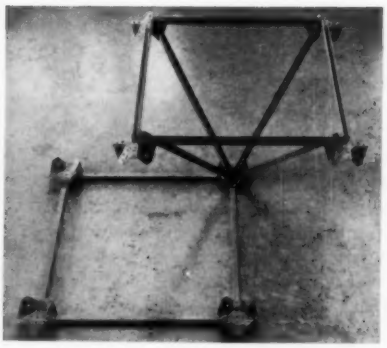
It is important to note that the use of ITV as a teaching aid integrated into standard teaching procedures does not imply the kind of operation usually referred to as "educational television." The ITV system needs no special studio, no cameramen, no directors, or miscellaneous technicians. It can be installed unobtrusively in any classroom, under the complete control of the instructor including the ability to cut the system in and out as desired. The simplicity and relatively low cost of ITV teaching aids permit more latitude in experimenting with the application of TV to the teaching process.

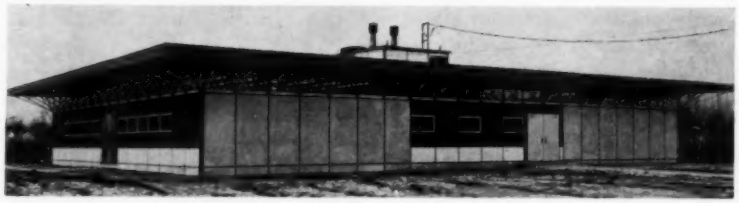
The observation room of the psychiatric research institute, usually fitted with a "one-way glass" window, now need not have a wall common with the patient's room. The observation room can be a doctor's office, a distant conference room or a classroom in another building.

The medical student need not sit in an amphitheatre 50 feet away from a six inch square area, surrounded by doctors and nurses, in which the surgeon is performing an operation. He can watch the operation on a monitor screen through the eye of an ITV camera two feet away from the operative field, perhaps hearing a lecture on technique in a distant classroom. (Or, if he is still in the amphitheatre he can at least see in detail what the surgeon is actually doing on the ITV monitor, while getting an overall picture by normal vision.)

Such uses for this adaptable closed-circuit television equipment are being uncovered daily — and the architect will be more and more concerned with the successful and attractive installation of the system's components as integral parts of his building designs.







Research Laboratory at U. of M. is based on structural unit shown above. Pentahedron consists of standard interchangeable framing members; connecting plates, bored and stamped for outstruts and instruts; and nuts, bolts and washers. Left: First space-frame school, Hoover School, Wayne, Mich. (architect: Charles W. Attwood)

A REPORT ON SPACE FRAME ASSEMBLIES

"A SPACE-FRAME can be defined as a structural framework made up of elements so arranged that the assembly cannot be analyzed as a series of two-dimensional or coplanar systems but must be considered as an integrated non-coplanar system, i.e., one in which the forces act in three or more directions in space."

It is with this definition that the Engineering Research Institute of the University of Michigan introduces its report on a program of research and experimentation aimed at the development of a demountable space-frame system of building construction. The testing program, sponsored by Unistrut Corp. of Wayne, Mich., was known as Project 1975 and culminated in the design and erection of a new Research Laboratory for the College of Architecture and Design at the University of Michigan. In this space-frame building, a photograph of which is shown above and the basic components of which are pictured beside it, the members form the edges of alternating erect and inverted pentahedrons (square pyramids) whose bases create two parallel planes and whose sides create a series of tetrahedrons (triangular pyramids) which interlock with the pentahedrons. The result is a network of zigzagging steel struts which distributes stresses so effectively that it can absorb loads far in excess of the strength of its individual parts. The design fulfills the original concepts of the program, which were:

1. That the system should be geared to industrial mass-production techniques, with emphasis on a minimum number of interchangeable parts. There are actually three components of the system: 4-ft struts which run horizontally at roof and ceiling levels and slant diagonally between them; connecting plates, each of which secures eight struts, four in its own horizontal lattice and four that radiate up or down from the opposing plates; and the nut, bolt and washer assemblies which tie the connector plates and the struts together.

2. That the structure should be simple to erect, with no single part so heavy or bulky that it could not be easily handled by one or two workmen. Actually the building was erected by students at the university. It consists basically of two space frames. One forms the floor framework, which measures 33 by 49 ft. The other is the roof framework, which is 90 by 70 and overhangs the enclosed area. It is supported by two outdoor columns and by interior wall studs. The main features of the structure are that (1) it is flexible, because its interior walls can be rearranged or removed with ease; (2) it is expandable, because its roof can be extended in any direction and the living area enlarged below; (3) it is demountable, because its standard parts are literally bolted or snapped together; and (4) it is reusable, because it can be unbolted, carried to another site and reassembled to form a similar or entirely different building.

The University of Michigan report describes in detail and discusses findings and conclusions on tests conducted on five different structural arrangements which led up to development of the *Unistrut* system as embodied in the College of Architecture building. It is laid out in a most practical manner, with the text and illustrative material arranged so that they can be studied at the same time. It is available through the University of Michigan Press at $7.50 per copy. A further study, on school construction using the framing system, will be published eventually as a separate report on Project 1979.

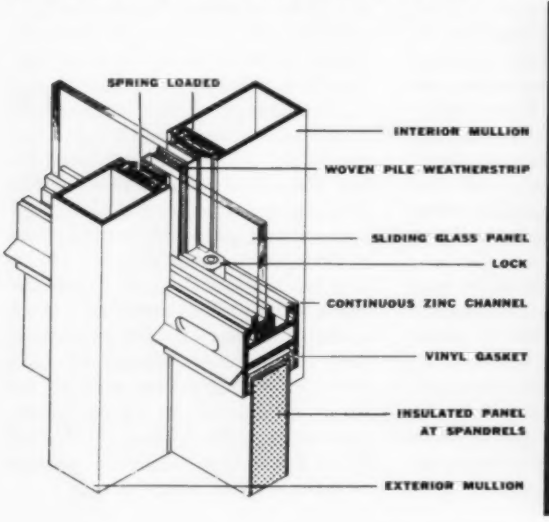
TWO-WAY SLIDING-SASH CURTAIN WALL ENCLOSES MILWAUKEE HOSPITAL

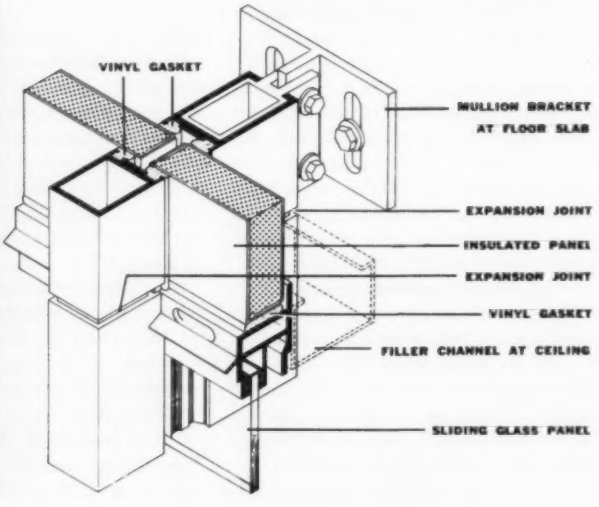
CURTAIN WALLS with a "new look" grace a 300-bed, six-story addition to the Mt. Sinai Hospital in Milwaukee. Designed for maximum flexibility and adaptability to a variety of wall patterns and materials, the new wall system — called *Gridwall* — is basically just that, a grid, in which the framing elements are of hollow, extruded aluminum. The mullions in this grid are split, with horizontal rails passing between them, as in a split rail fence. The space between the double mullion accommodates, in any combination, fixed insulated panels up to 1⅛ in. thick, fixed glass up to 1⅛ in. thick or bypassing horizontal sliding sash of ¼-in. plate glass that will slide in either direction on the horizontal grid rails for ventilation and ease of cleaning.

The wall system used in Mt. Sinai combines sliding sash and fixed structural glass spandrels of grayed turquoise. Other materials, such as porcelain enamel and glass mosaic, can be used for spandrels. As can be seen in the typical isometrics shown below, weathertightness is ensured, when the sash is locked in position, by mohair pile weatherstripping which is clamped to the sash by a spring-loaded aluminum section housed in each half of the split mullion. Weepholes provide for drainage. Framing members of the grid are so constructed that, after installation, the metal can expand or contract without danger of leakage at the joints. Joints are connected by means of insert lugs fastened to one frame member and slip-fitted into the hollow portion of the abutting frame member. *Gridwall* is produced by Glide Windows, Inc. of North Hollywood, Calif.

The new wing of Mt. Sinai is so designed that it can support six more floors. Completely air-conditioned, it includes a large auditorium for both hospital and community use and features an audio-visual intercommunication system, a pneumatic tube system and a conveyor-belt assembly type kitchen. A. Epstein and Sons, Inc., Architects & Engineers, of Chicago, designed the building. (*More Roundup on page 248*)

Sliding sash has been installed on exterior (right) of Mt. Sinai Hospital (rendering above). Structural glass spandrels not yet set over concrete block back-up. Isometrics below show sliding glass windows and insulated panels at stool line (left) and spandrel panel at floor slab anchor and sliding glass at ceiling line (right)



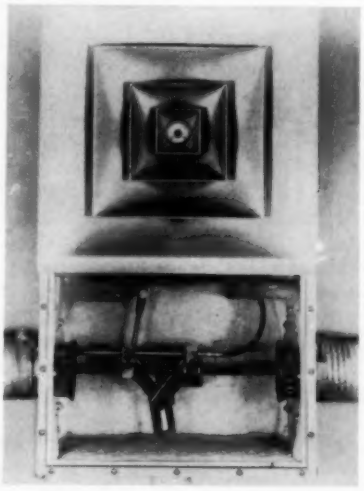


VERTICAL "WOOD" PANELING WITH FORMICA

SPECIAL WOOD PANELING EFFECTS are now possible with *Formica*. A new quick-setting, high-bond-strength contact adhesive makes it possible for Formica sheets to be applied to vertical surfaces. In the interior illustrated at left, standard 1/16 in. thick *Formica Tawny Walnut* (No. 18-FC-22) flat sheets were cut into random-width planks and applied to a ¾-in. plywood backing, with contact adhesive spread on both surfaces. After cutting, the edges of the Formica were beveled with a standard router bevel cutter. Each plank was installed using small wire brads as stop guides to create a realistic planked wall effect. A decorative seam can be obtained by wiping the open joints with enamel, Formica Seamfil or other coloring agent. Formica can also be cut into blocks and applied to vertical surfaces. Formica paneling features all the qualities of standard Formica surfaces, including low maintenance, resistance to staining, etc. *The Formica Co., 4614 Spring Grove Ave., Cincinnati, Ohio.*

ATTENUATOR-DIFFUSER UNIT PROVIDES ROOM TEMPERATURE CONTROL

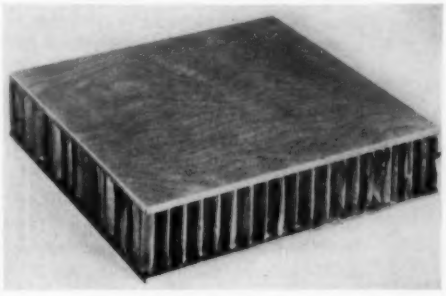
INDIVIDUAL ROOM CONTROL of temperature in dual-duct, high-velocity air conditioning systems, without changing the volume of air supply, is possible with the attenuator-diffuser unit shown at right. In this system, temperature is changed by mixing hot and cold air, supplied from a pair of risers or ducts, and discharging the resultant mixture in the occupied area. Thus, by maintaining the same air flow pattern and the same percentage of fresh air at all times, areas are kept at optimum comfort levels and occupants are not subjected to sudden shifts in air movement or quality. A proportional mixing valve located inside the attenuator chamber controls both the warm and cold air supplies simultaneously. Temperature may be regulated by manual control, remote control or automatic room thermostats. The hot and cold duct outlets are opened and closed in inverse ratio, so that as the amount of warm air is *increased*, for example, the proportion of cold air is *decreased* by the same amount. In the set-up at right, the hot and cold ducts are opened an equal amount. The arrangement of concentric cones in the diffuser (which is removed to show the inside of the attenuator box) brings room air into the diffuser section, where it is mixed with supply air before being ejected into the conditioned area. *Anemostat Corp. of America, 10 East 39th St., New York, N. Y.*

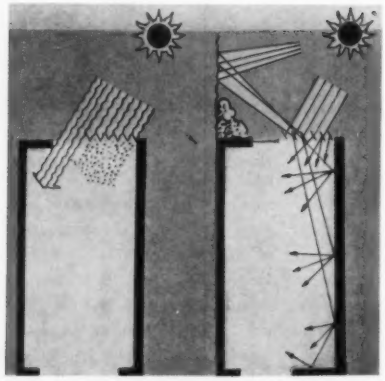


LIGHT STRUCTURAL PANEL COMBINES PAPER HONEYCOMB AND PLASTICS

A STRONG YET LIGHTWEIGHT STRUCTURAL PANEL for commercial and residential paneling and furniture is composed of Kraft paper honeycomb, impregnated with phenolic resin for rigidity, sandwiched between *Conolite* plastic laminate surfacing. In some instances a firm plastic backing board is placed over the honeycomb, before Conolite is applied, to give the panel greater rigidity. The manufacturer states that an exclusive method has been developed for making the panels in continuous lengths. Conolite surfaces, available in many colors and patterns, including wood grain, marble, dots and scrims, are said to defy alcohol and other liquid stains, resist scratching, chipping or marring, and withstand boiling water, acids, greases and temperatures to 350 F. *Continental Can Co., Honeycomb Div., 100 East 42nd St., New York 17, N. Y.*

(More Products on page 260)





DAYLIGHT LOUVER PANELS

The Daylight Louver Panel is a formed, painted sheet of Plexiglas acrylic plastic which combines opaque louver slats, light transmission and weather closure in one continuous surface for the purpose of daylight control in buildings. Each panel is made of a single sheet of transparent or diffusing Plexiglas with a flat flange on each side for simple weather-tight erection. An 18-page booklet, well illustrated with drawings and photographs, presents engineering and operating information about the panels. Two of the illustrations, shown at left, indicate how the panels will control sun and sky glare and improve distribution of light (top) and how they will reduce solar heat gain inside buildings by reflecting a substantial part of the direct and sky-reflected radiation from the sun (bottom). AIA File 26-A-9. *Rohm & Haas Co., Washington Square, Philadelphia 5, Pa.**

Automatic Coal Heat *for the Nation's Schools* is the title of a 62-page booklet which contains 28 case histories showing how modern coal utilization equipment has been installed in schools in 19 communities located in 28 states. *National Coal Association, Director of Market Promotion Dept., Southern Bldg., Washington 5, D. C.*

Hot Water Heating Problems as encountered in secondary schools for both shower and dishwater loads are discussed in a special file made available to architects and mechanical designers by *Fred H. Schaub Engineering Co., 2110 So. Marshall Blvd., Chicago 23, Ill.*

Oxychloride Cement Flooring is covered in two 4-page bulletins, one of which gives technical data and the other a description and advantages. AIA File 23-D. *Oxychloride Cement Assn., Inc., 1028 Connecticut Ave., Washington 6.*

Steel Floor Armor to prolong the life of floors is presented in a new brochure which shows both the application and installation of *Hexsteel* heavy-duty floor armor and *Floorsteel* flexible-type floor armor. *Klemp Metal Grating Corp., Dept. KL, 6601 So. Melvina Ave., Chicago 38.*

Sound Systems for Schools. This 8-page brochure pictures a number of communication elements for school systems, with sizes and descriptions. *DuKane Corp., St. Charles, Ill.**

Sealants for Building Construction, including expansion joint construction, curtain wall paneling, window glazing and general caulking, are covered in a 4-page bulletin from *Presstite Engineering Co., 3798 Chouteau Ave., St. Louis, Mo.**

Fire Pumps. Selection charts and a set of "typical" fire pump specifications are features of a new 36-page fire pump bulletin (No. B-1500) published by *Peerless Pump Div., Food Machinery and Chemical Corp., 301 West Avenue 26, Los Angeles 31, Calif.*

Conductive Flooring for hospital operating suites which is also said to be sanitary, easily maintained, attractive, comfortable, structurally adaptable, durable and economical are covered in a brochure from *Crossfield Products Corp., 140 Valley Rd., Roselle Park, N. J.**

Flexible Partitioning in offices, factories, hospitals, stores, showrooms, etc., with *Vizupoles*, which are adjustable poles that can be positioned between floor and ceiling, is discussed in a 26-page brochure (Catalog 365) from *L. A. Darling Co., Bronson, Mich.*

Commercial Water Heating Equipment. A loose-leaf notebook offering information on *Burkay* water heaters is tabbed with the following sections: Spec. Sheets, For Restaurants, For Apartments and Motels, For Laundries and Laundry Stores, For Industrial Plants, For Schools, For Swimming Pools, For Car Washing, Installation Data, Miscellaneous Information and Sample Specifications. *A. O. Smith Corp., Permaglas Div., Kankakee, Ill.**

Air Handling Units for commercial, industrial and residential heating and cooling are presented in a 40-page engineering manual (No. E.M.-G.5622) published as a reference guide for architects, engineers and air conditioning contractors by *Drayer-Hanson, Inc., 3301 Medford St., Los Angeles 63.*

Precast Concrete Floors, their design, structural details, and job specifications are covered in an 8-page booklet on *Flexicore Concrete Slabs*. Pictures of typical installations are included. AIA File 4-K. *Flexicore Company, Inc., 1932 E. Monument Ave., Dayton 1, Ohio.**

Conductive Tile. *Conduct-O-Tile*, intended for use in hospital operating rooms and any other areas where combustible anesthetics are used or stored, is described in a 4-page folder (No. 506). AIA File 23a. *American-Olean Tile Company, 1000 Cannon Avenue, Lansdale, Pa.**

Incinerators. A catalog and technical bulletin (AIA File 35-J-4) describing destructors and incinerators for apartments, hospitals, stores, homes, municipalities and the like can be had from *Morse Boulger Destructor Company, 80 Fifth Ave., New York 11, N. Y.**

Room Heating Problems are discussed in a 16-page bulletin titled *Solving Modern Room Heat Distribution Problems.* The booklet describes proper radiator installations for various types and sizes of rooms. *Shaw-Perkins Mfg. Co., 201 E. Carson St., Pittsburgh 19, Pa.**

Modern Sheet Copper Practices is a 112-page, spiral-bound book which contains a series of detail drawings in perspective, each with its own specification, and suggested practices for roofing, flashing, expansion joints, gutters, through-wall flashing, spires, domes, etc. Manual C-1 (AIA File 12). *The American Brass Co., Waterbury 20, Conn.**

* *Other product information in Sweet's Architectural File, 1956.*

(Continued on page 304)

Pontiac City Hall, Pontiac, Michigan
Architect: Leo J. Heenan, A. I. A.
General Contractor: J. A. Fredman, Inc.
Equipped with Adlake Double Hung Windows

Another Adlake aluminum window installation

Adlake
PROVEN QUALITY WINDOW
This window meets or exceeds all quality industry specifications for aluminum windows.
THE Adams & Westlake COMPANY
Elkhart, Indiana

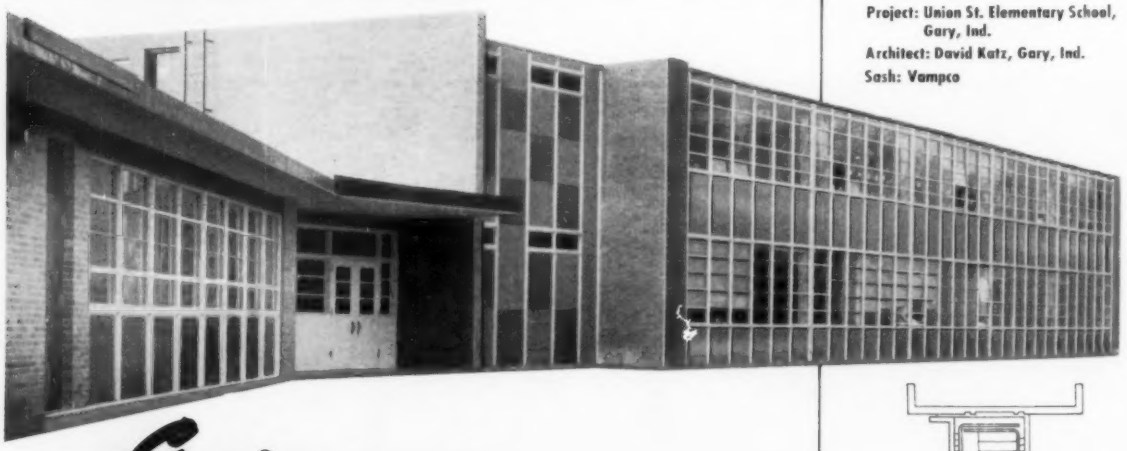
- **Minimum air infiltration**
- **Finger-tip control**
- **No painting or maintenance**
- **No warp, rot, rattle, stick or swell**
- **Guaranteed non-metallic weatherstripping (patented serrated guides on double hung windows)**

Adlake
99th year
of serving the transportation, building and control industries

The Adams & Westlake Company

Established 1857 • Elkhart, Indiana • Chicago • New York

PANEL WALL CONSTRUCTION DETAILS...



Project: Union St. Elementary School, Gary, Ind.
Architect: David Katz, Gary, Ind.
Sash: Vampco

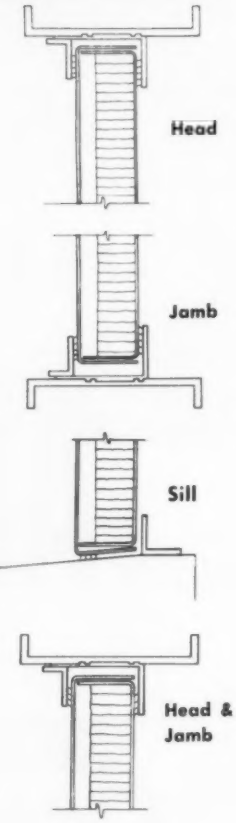
Erie U-20 . . .

A PORCELAIN ENAMEL PANEL THAT INSTALLS EASILY IN ANY SASH FRAME!

The Erie U-20 Panel is designed for sash frame installation—in any and all makes—with an absolute minimum of time and labor. Fiber glass insulated, yet only 1" thick, it offers a U-factor of approximately .20. 1½" and 2" thicknesses are also available in a variety of modifications, adapting the panel to all types of sash or mullion bar mounting. Stops or screws may be used for retention.

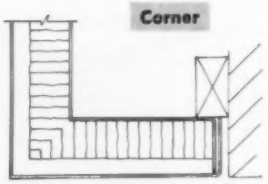
The U-20 Panel is double faced—mechanically assembled for permanence—and finished with weather-proof porcelain enamel in stable, lifetime colors.

Erie U-20 Panels—designed and fabricated by a company with 25 years of experience in architectural porcelain enamel—offer you complete freedom of design and minimum detailing in your curtain wall projects.



THE Erie ENAMELING COMPANY
ERIE, PENNSYLVANIA
CHICAGO • PHILADELPHIA

Write
for your copy of Sketch Book III giving full details on U-20 and U-16 Panels.



For the school shown above a modified version of the U-20 was specified in a tan and rose combination.

DESIGN OF FOUNDATION DRAINS — 1

By Philip P. Page, Jr., Supervising Engineer, Seelye Stevenson Value & Knecht

An understanding of the problems involved in foundation drain design can best be had by studying the nature of groundwater. Groundwater is water in the pores of the soil, and as such it follows the laws of hydraulics. Its origin is rainwater, which seeps through the soil until it is stopped by some impervious layer. This layer may be at a very great depth. The top of this water in the soil is called the groundwater level. The water flows through the soil until it emerges aboveground in a body of water. The friction between the soil and the water flowing through it is overcome by building up a higher groundwater level away from the point of emergence. Therefore, the following points can be made about groundwater:

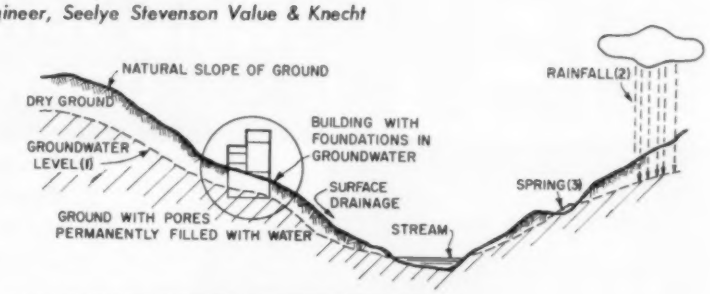
1. The groundwater level varies seasonally with the amount of rainfall.
2. The groundwater level follows the general contour of the land, but is closer to the surface in low ground and farther from the surface in high ground.
3. The direction of groundwater flow is always in the direction of the lower groundwater level.

Hydrostatic Head

Groundwater, following the laws of hydraulics, always produces a hydrostatic head or water pressure which at any point is equal to the depth of that point below groundwater level times the unit weight of water, 62.4 pcf. The effect of this pressure upon a building is illustrated at right. The earth pressure is reduced (from 240 to 100 psf) because of the buoyant effect of the water on the soil particles, but the total pressure is greatly increased.

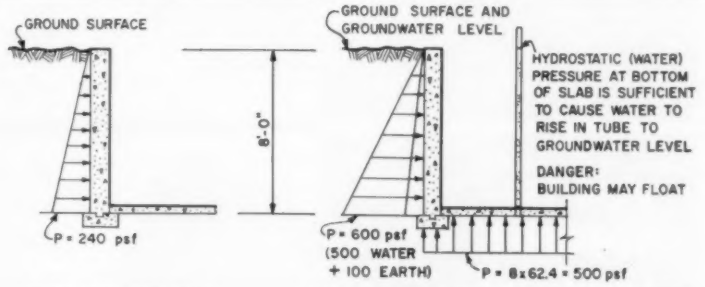
Purpose of Foundation Drains

Foundation drains lower the groundwater, thus preventing building up of a hydrostatic head against the walls or floor of a building with resultant leakage or structural damage. A drainage system should consist of footing drains of sufficient size and an adequate outfall or method of water disposal. The enlarged detail at right shows the basic elements of a foundation drain.



BASIC FACTORS AFFECTING GROUNDWATER LEVEL

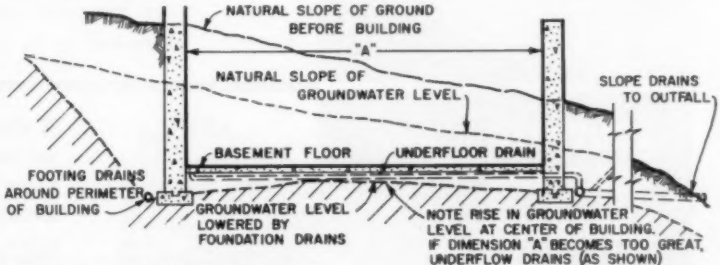
(1) Groundwater level tends to follow ground contour—deeper on hills, shallower in valleys. (2) Rainfall percolates through ground to recharge groundwater. Groundwater level varies with amount of rainfall. (3) Springs occur where local ground depressions place ground level below groundwater level.


GROUND SURFACE
8'-0"
P = 240 psf
GROUND SURFACE AND GROUNDWATER LEVEL
HYDROSTATIC (WATER) PRESSURE AT BOTTOM OF SLAB IS SUFFICIENT TO CAUSE WATER TO RISE IN TUBE TO GROUNDWATER LEVEL
DANGER: BUILDING MAY FLOAT
P = 600 psf (500 WATER + 100 EARTH)
P = 8x62.4 = 500 psf

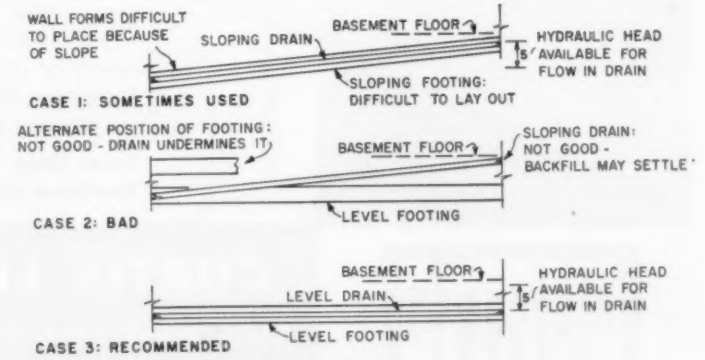
EARTH PRESSURE ONLY — EARTH PRESSURE PLUS HYDROSTATIC PRESSURE

EFFECT OF HYDROSTATIC PRESSURE ON A BUILDING

Note: Waterproofing is not sufficient in itself to protect walls against groundwater unless they can take heavy earth and water loads


NATURAL SLOPE OF GROUND BEFORE BUILDING
"A"
NATURAL SLOPE OF GROUNDWATER LEVEL
SLOPE DRAINS TO OUTFALL
BASEMENT FLOOR
UNDERFLOOR DRAIN
FOOTING DRAINS AROUND PERIMETER OF BUILDING
GROUNDWATER LEVEL LOWERED BY FOUNDATION DRAINS
NOTE RISE IN GROUNDWATER LEVEL AT CENTER OF BUILDING. IF DIMENSION "A" BECOMES TOO GREAT, UNDERFLOW DRAINS (AS SHOWN) SHOULD BE PROVIDED

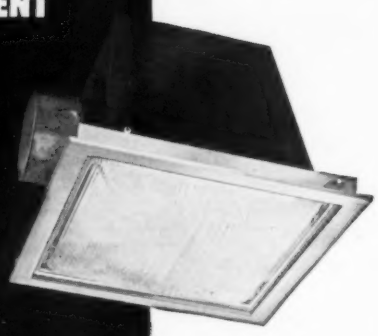
ELEMENTS OF A FOUNDATION DRAIN


WALL FORMS DIFFICULT TO PLACE BECAUSE OF SLOPE
SLOPING DRAIN
BASEMENT FLOOR
HYDRAULIC HEAD AVAILABLE FOR FLOW IN DRAIN
SLOPING FOOTING: DIFFICULT TO LAY OUT
CASE 1: SOMETIMES USED
ALTERNATE POSITION OF FOOTING: NOT GOOD - DRAIN UNDERMINES IT
BASEMENT FLOOR
SLOPING DRAIN: NOT GOOD - BACKFILL MAY SETTLE
LEVEL FOOTING
CASE 2: BAD
BASEMENT FLOOR
HYDRAULIC HEAD AVAILABLE FOR FLOW IN DRAIN
LEVEL DRAIN
LEVEL FOOTING
CASE 3: RECOMMENDED

RELATIONSHIP OF FOOTING ELEVATION TO DRAIN

NEW CURTIS SCHOOL CORRIDOR LIGHTING UNITS

INCANDESCENT SQUARE RECESSED



A square recessed incandescent downlight that can be recessed into a 12″ opening in any type ceiling construction.

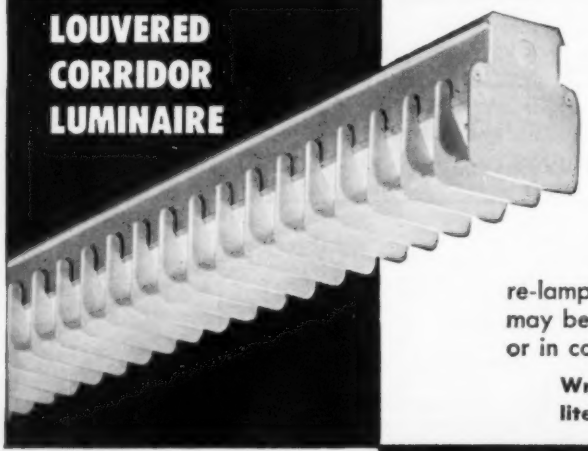
This new Curtis recessed unit is for use with either 150-W, 200-W or 300-W incandescent lamps. A specially designed lamp holder plate permits easy adaption for correct positioning of these three different wattage lamps. The hinged door accommodates either a variety of lenses or a louver. Units pass Underwriters approval when installed singly or when grouped or patterned together.

PRINCESS CORRIDOR LUMINAIRE

A new completely enclosed Fluorescent Luminaire for 4′ and 8′ Rapid Start or Slimline lamps.

This completely enclosed luminaire is ideal for corridors and other areas where wide light distribution is desirable. The white plastic polystyrene plastic panels may be easily removed for cleaning or lamp replacement. Units may be installed individually or in continuous lines, close-ceiling or pendant mounted.

LOUVERED CORRIDOR LUMINAIRE



A distinctive Fluorescent Luminaire, with attractive white enameled steel louvers for 4′ and 8′ Rapid Start or Slimline lamps.

This new Curtis all steel luminaire is finished white baked Fluracite enamel. It is a highly efficient direct unit designed to give 25° lengthwise shielding. The louver is hinged from either side for fast, easy re-lamping or cleaning without the use of tools. Units may be close-ceiling or pendant mounted individually or in continuous lines.

Write Dept. E3-CP for complete, descriptive literature on these new Curtis corridor units.

CURTIS

CURTIS LIGHTING, INC.

6135 WEST 65th STREET CHICAGO 38, ILLINOIS

DESIGN OF FOUNDATION DRAINS — 2

By Philip P. Page, Jr., Supervising Engineer, Seelye Stevenson Value & Knecht

Estimation of Infiltration

The amount of infiltration varies according to the type of soil and height of groundwater above footings. Clays have such a small flow of groundwater that nominal 4-in. drains are satisfactory for all but the largest installations. Silts have more flow. Sands and gravels can have such a heavy flow that pumping tests are required to determine the flow quantity.

Location of Drains

Drains are placed around the periphery of a building far enough below floor level to develop sufficient hydraulic head for drainage. The footing is always placed at least 4 in. below the invert of the drain (bottom of the inside diameter) to prevent groundwater flowing under the footing from washing out soil fines, with resultant settlement of the structure. For buildings covering a large area it may be necessary to place underfloor drains to prevent the building up of head in the center.

Selection of Size of Drain

Once the infiltration has been established and the plan of the drains laid out, the size of pipe and elevation of invert must be established. The nomograph at right can be used. The selection of the proper drain then requires an economic study.

Example

Given: Inflow of 100 gpm, established by a pumping test during excavation
Length of drain—350 ft
Friction factor for pipes—n = 0.015

Find: Underdrainage design required to keep cellar dry

Solution: Assume a 6-in. pipe. From nomograph, required slope for a 6-in. pipe and 100 gpm discharge is 0.0024. Hydraulic drop is 350 x 0.0024 = 0.84 ft. Bottom of drain should be, therefore, 0.84 + 0.5 (thickness of floor slab) = 1.34 ft below surface of floor.

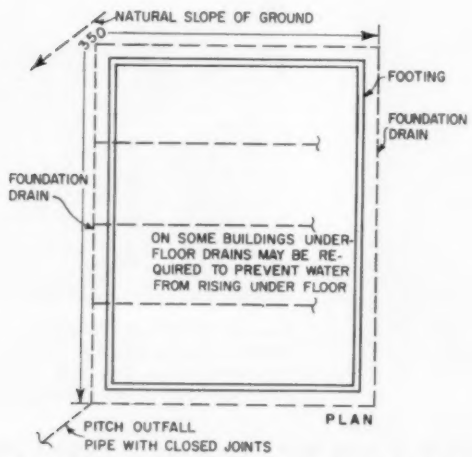
To adjust for $n = 0.019$, multiply inflow by 0.019/0.015 and then use nomograph.
To adjust for $n = 0.013$, multiply inflow by 0.013/0.015 and then use nomograph.

Example

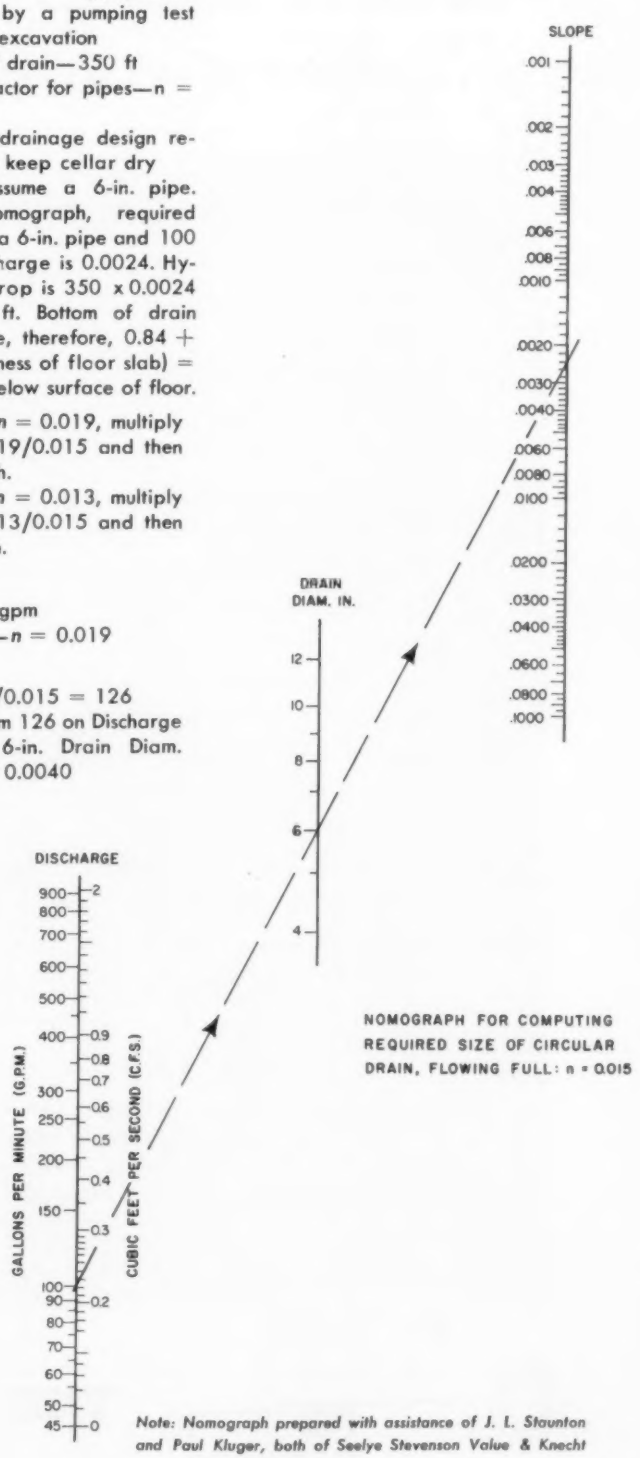
Inflow of 100 gpm
Friction factor—$n = 0.019$

Solution

$100 \times 0.019/0.015 = 126$
Taking line from 126 on Discharge bar through 6-in. Drain Diam. gives Slope of 0.0040



Note: If gravity outflow is not practical or possible, a sump has to be used with a pump to draw out groundwater



NOMOGRAPH FOR COMPUTING REQUIRED SIZE OF CIRCULAR DRAIN, FLOWING FULL: n = 0.015

Note: Nomograph prepared with assistance of J. L. Staunton and Paul Kluger, both of Seelye Stevenson Value & Knecht

Good Windows, Yes!
—But A Bayley Specification assures you of MUCH MORE!!

Check these Extra Bayley Services

- Engineering Consultation Based on 77 Years of Reliability and Leadership In Window Development.
- Pre-engineering Collaboration in applying time-proven, basic designs to the specific project.
- Engineering Field and Sales Cooperation with all parties responsible for the project's completion.
- Engineered Detailing specifically for each project—individualized "custom planning."
- Engineering Controlled Follow-through on all manufacturing operations involved in completing a specific contract.
- Engineered Installation Preparation—detailed marking, scheduling and delivery in Bayley's own trucks to the job site.
- Engineered Installation by Bayley's trained and supervised installation mechanics.
- Engineering Inspection of Completed Project to insure a satisfactory, quality finished installation.

PLUS

The over-all reliability of a 77 year old, nationally recognized, financially responsible company with complete, modern manufacturing facilities; supported by a nation-wide sales engineering and service organization.

Bayley Projected Windows (and Bayley Curtain-Walls and Window-Walls) — in aluminum and steel — have had a major influence on today's trend from the old conventional to the modern in hospitals, homes and institutions. If you are not familiar with Bayley Details see Sweet's or write; or call in your local Bayley Representative.

Bayley Projected Windows in the St. Andrew Home, Chicago suburb. Architect, Leo Strelka, Oak Park, Ill,; Builder, John Gebhardt & Son, Chicago, Ill.

QUALITY APPROVED P-A2

WE CHOSE ALCOA ALUMINUM

THE WILLIAM BAYLEY CO.

Springfield, Ohio

District Sales Offices: Springfield • Chicago • New York • Washington

DESIGN OF FOUNDATION DRAINS — 3

By Philip P. Page, Jr., Supervising Engineer, Seelye Stevenson Value & Knecht

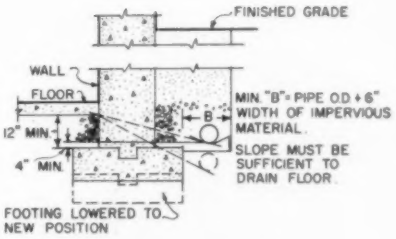
Type of Drain

To permit the entry of water but prevent the entry of soil a reverse filter surrounds the foundation drain. This reverse filter consists of coarse gravel next to the pipe followed by layers of coarse and then fine sand. Porous or perforated pipe is preferable to open joint pipe. The table below shows the basic characteristics of the main types of pipe used. The pipe generally is laid level, without slope, to avoid the problem of sloping footing bottoms, as shown on Sheet 1. A footing seal of impervious material should be provided to prevent the flow of water under the footing. Perforated clay pipe which has holes only on the bottom should be laid on a gravel bed over the clay seal.

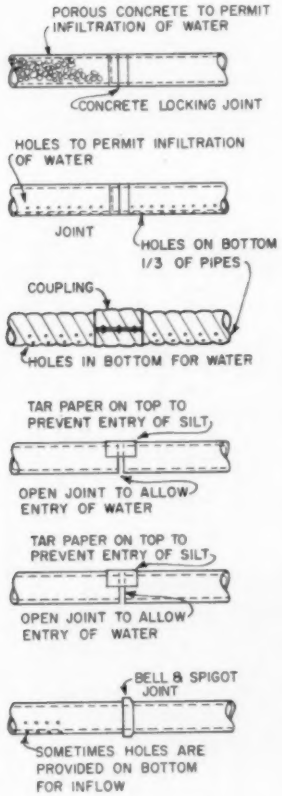
Outfall

Disposal of the water collected in the drains must be given careful thought. Too often drawings simply indicate an arrow to an outfall or a dry well. The outfall must be capable of taking the discharge without becoming surcharged. Generally the connection to sanitary sewers is prohibited by law and certainly is not to be encouraged. Dry wells should not be specified, for obvious reasons, when they would be below the water table. This would be like pulling a cork out of the hole in the bottom of a rowboat to let the water out. Dry wells are satisfactory, though, when they will stay above the water table and when the soil is permeable enough to dissipate the inflow.

Good outfalls consist of storm sewers or other drainage devices located at a lower elevation than that of the footings. Sometimes such an outfall is impossible to reach and it becomes necessary or more economical to collect the water in a sump and to pump out to surface drainage.

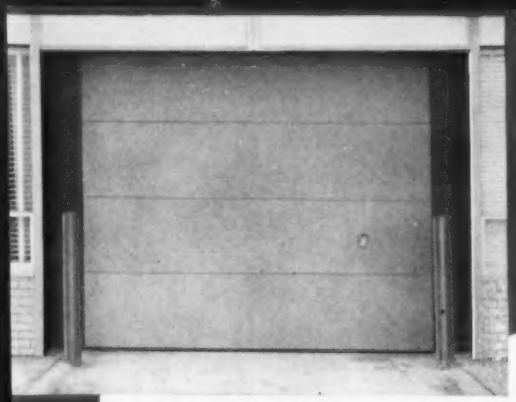


Slope is increased as pipe diameter is decreased, as can be seen in nomograph on Sheet 2. When drain is lowered to increase slope, footing must be lowered to stay below level of drain and thus prevent silt from being washed away from under footing. Selection of drain size usually depends on cost differential between small pipe, and therefore more excavation for lowering of footings, and more costly large pipe but less digging.


POROUS CONCRETE TO PERMIT INFILTRATION OF WATER
CONCRETE LOCKING JOINT
HOLES TO PERMIT INFILTRATION OF WATER
JOINT
HOLES ON BOTTOM 1/3 OF PIPES
COUPLING
HOLES IN BOTTOM FOR WATER
TAR PAPER ON TOP TO PREVENT ENTRY OF SILT
OPEN JOINT TO ALLOW ENTRY OF WATER
TAR PAPER ON TOP TO PREVENT ENTRY OF SILT
OPEN JOINT TO ALLOW ENTRY OF WATER
BELL & SPIGOT JOINT
SOMETIMES HOLES ARE PROVIDED ON BOTTOM FOR INFLOW

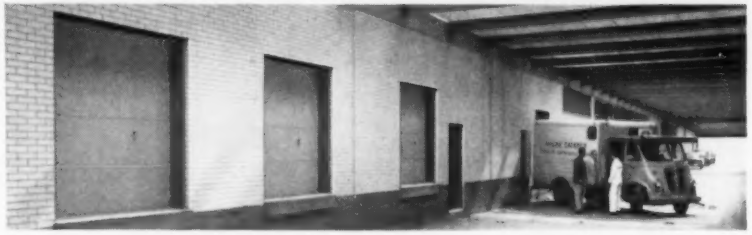
BASIC CHARACTERISTICS OF DRAIN PIPES

Type	*n*	Advantages	Disadvantages
Porous concrete	0.015	Freedom from silting, erosion and corrosion; easily laid; resists surcharge load	Most expensive
Perforated concrete	0.015	Same as porous	Expensive
Perforated metal	0.019	Freedom from silting; resists surcharge load	Possible corrosion; high *n* value
Open joint concrete	0.015	Strong; resists surcharge load	Joints may permit entry of silt, which clogs line; harder to lay; backfill must be laid with more care
Open joint clay	0.019	Least expensive; resists corrosion	Joints may silt up; high *n* value; more easily broken by careless backfill or surcharge
Vitrified clay	0.013	Low *n* value; best for runs to outfall; resists corrosion and erosion	Least effective entry of water



LAMBERT-ST. LOUIS MUNICIPAL AIR TERMINAL

uses 16 Crawford Industrial Doors to aid in free flow of baggage, freight and catering service to planes



Among the most important and socially significant new buildings going up throughout the world today are air terminals and one of the most interesting of these is the Lambert-St. Louis Air Terminal in which function and brilliant design are so effectively combined.

The building is of steel and masonry construction, 412 feet long and 120 feet wide and is crowned by a dramatic "floating dome" which shelters approximately a quarter million square feet of this "Grand Central of the Air".

Inherent in the design of the terminal, of course, are facilities to assure the rapid flow of all kinds of traffic . . . passenger, luggage, express, freight and catering. Included in these facilities, at key locations, are Crawford Industrial Doors, chosen for their good design, good engineering, stout construction and for their quarter-century reputation for delivering top service.

If you have a door problem, we'll welcome your inquiry and it will get quick, intelligent attention. Architects, write for complete file of Crawford literature including the Crawford 60-Second Door Selector, the easiest-to-use door manual ever published. Crawford Door Co., 199-20263 Hoover Road, Detroit 5, Michigan. Plants in 10 cities; Warehouses in 105 cities; Sales and Service everywhere. In Canada, F. Fentiman & Sons Ltd., Ottawa, Ontario.

New Terminal Building
Lambert-St. Louis Municipal Airport

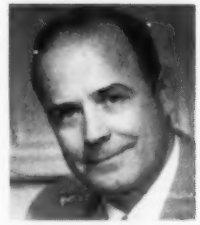
Architect and Engineer
Hellmuth, Yamasaki & Leinweber, Architects
Detroit, St. Louis

Structural Engineer
William C. Becker, St. Louis

Mechanical Engineer
Ferris & Hamig, St. Louis

Contractors
L & R Construction Company, St. Louis

Crawford Doors sold and installed by
Crawford Door Sales Co. of St. Louis



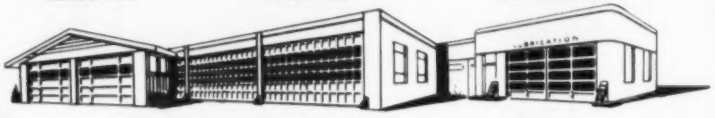
M. R. ZUMWALT,
President,
Crawford Door Sales Co.
of St. Louis

Crawford MARVEL-LIFT Doors

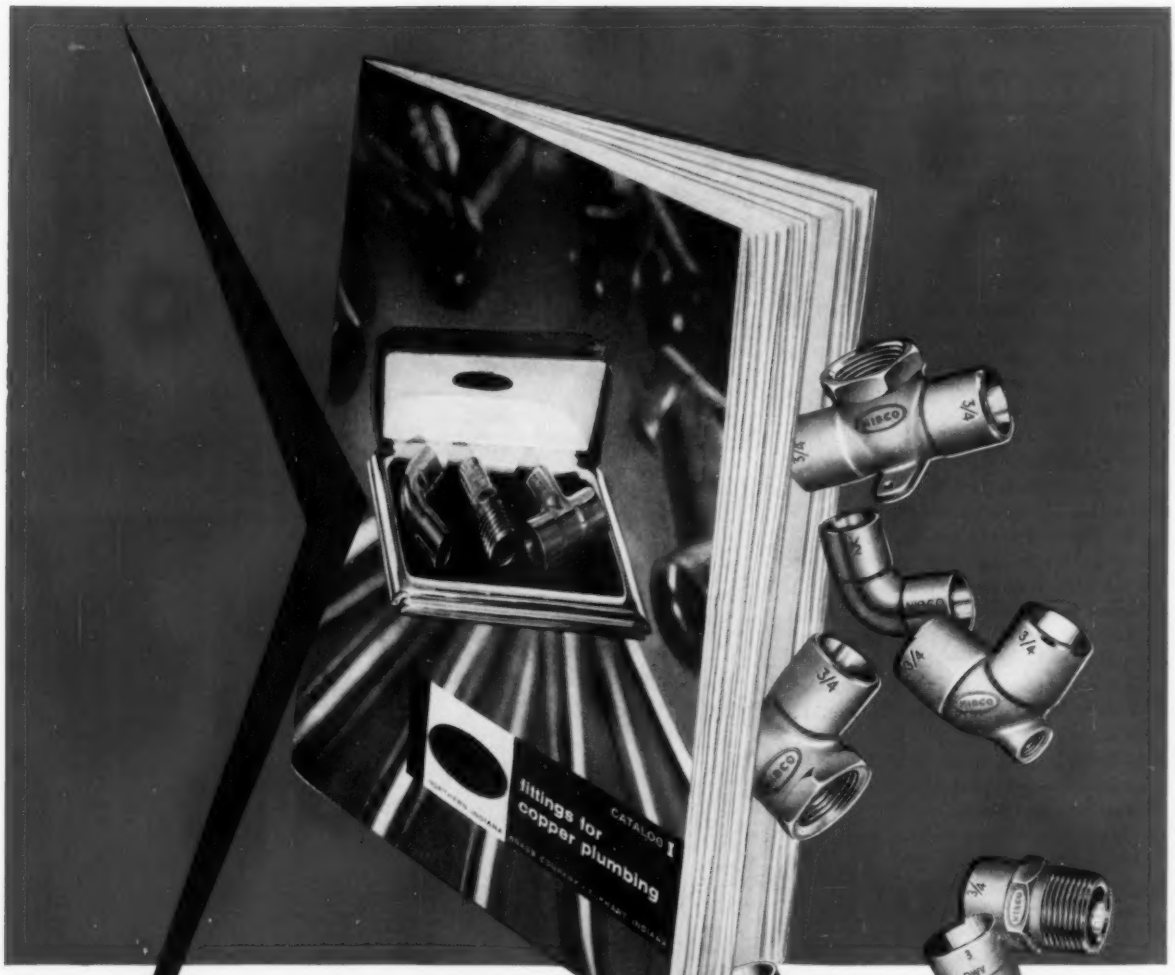
RESIDENTIAL INDUSTRIAL COMMERCIAL

GM GENERAL MOTORS

DELCO DAYTON OHIO



Delco-matic GARAGE DOOR OPERATORS



send today

for your free copy
of **NIBCO**'s new copper
fittings catalog

Illustrates and describes wrot fittings, cast solder fittings, cast drainage fittings, flared tube fittings, flanged fittings and accessories.

NIBCO

NORTHERN INDIANA BRASS COMPANY
565 Plum Street, Elkhart, Indiana

Please send me NIBCO's new COPPER FITTINGS CATALOG I

NAME_____

ADDRESS_____

CITY_____

STATE_____

(Continued from page 236)

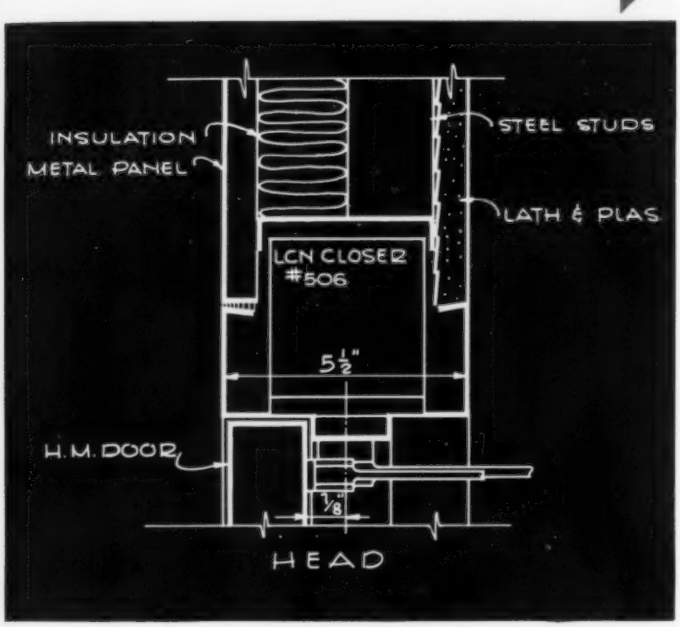
High Temperature Water Heating System has been installed to supply the space heating for the new Reaction Motors' plant in Denville, N. J. This system was specified by architects Frank Grad & Son of Newark, N. J., when a saving of 10 per cent in initial investment was calculated over a conventional high-pressure steam design and the following anticipated operational advantages were described: (1) fuel economy due to (a) elimination of all condensate and other losses inherent in a steam system, (b) improved temperature control, (c) high boiler efficiency and (d) reduction of radiation losses throughout the system; (2) reduced maintenance and repair costs due to the elimination of all traps, pressure-reducing stations and condensate return equipment; and (3) virtual elimination of feedwater treatment due to the closed system, which circulates the same water continually. The high-temperature water is heated in two 500-hp, packaged, horizontal, fire-tube boilers capable of delivering 17 million Btu per hr and circulated through several types of systems at a maximum temperature of 350 F.

High temperature water is also being used for space heating at Camp Gagetown, a new $50 million plus Army training center in New Brunswick, Canada. Space heating on a scale never before attempted in Canada will be accomplished by distribution of hot water through 22 miles of underground pipe. Advantages claimed by Wiggs, Walford, Frost & Lindsay, consulting engineers, for the high temperature water system over steam are: (1) hot water mains, if properly insulated, can be run for long distances almost regardless of level; (2) corrosion risk is greatly reduced; (3) there is no trap loss or trap maintenance; (4) heat can be stored in the return mains or in accumulators to even out fluctuating load, thus cutting size and cost of boiler; (5) the amount of heat distributed is adjustable within fine limits (6) circuits for heating domestic hot water can be kept at high and constant temperature while space heating circuits can be modulated to match the weather.

Plastics in Building. A special two-week summer course will be offered at M.I.T. starting on Monday, July 2nd. The program will be devoted to the design of a small structure in which, because of its unique requirements, the large-scale use of reinforced plastic seems to offer numerous and distinct advantages. Its use in conjunction with other materials of construction will also be studied. The course will be under the joint supervision of the Department of Architecture and the Department of Civil and Sanitary Engineering. Special guest lecturers will include Eliot Noyes, Dr. Lucius Gilman and W. Burdette Wilkins. Further information is available from *Prof. Ernest H. Huntress, Director of the Summer Session, M.I.T., Cambridge 39, Mass.*

Fire Doors have new labels which show both opening classification and hourly ratings. Thus the conflicts that have existed because of the difference in building code requirements, based on protection against loss of life, and standards of the Underwriters' Laboratories, based on protection of property, have been eliminated. The new labeling system assures the architect that doors are equal to the standards set up by the standard time-temperature test.

(Continued on page 252)



CONSTRUCTION DETAILS

for LCN Overhead Concealed Door Closer Installation Shown on Opposite Page

The LCN Series 500 Closer's Main Points:

1. Efficient, full rack-and-pinion, two-speed control of the door
2. Mechanism entirely concealed; arm visible on inside of an out-swinging door
3. Hydraulic back-check prevents door's being thrown open violently to damage door, walls, etc.
4. Double lever arm provides maximum power to overcome wind and drafts
5. Arm may be hold-open type, 90° to 140° or 140° to 180°

Complete Catalog on Request—No Obligation
or See Sweet's 1956, Sec. 18e/L

LCN CLOSERS, INC., PRINCETON, ILLINOIS

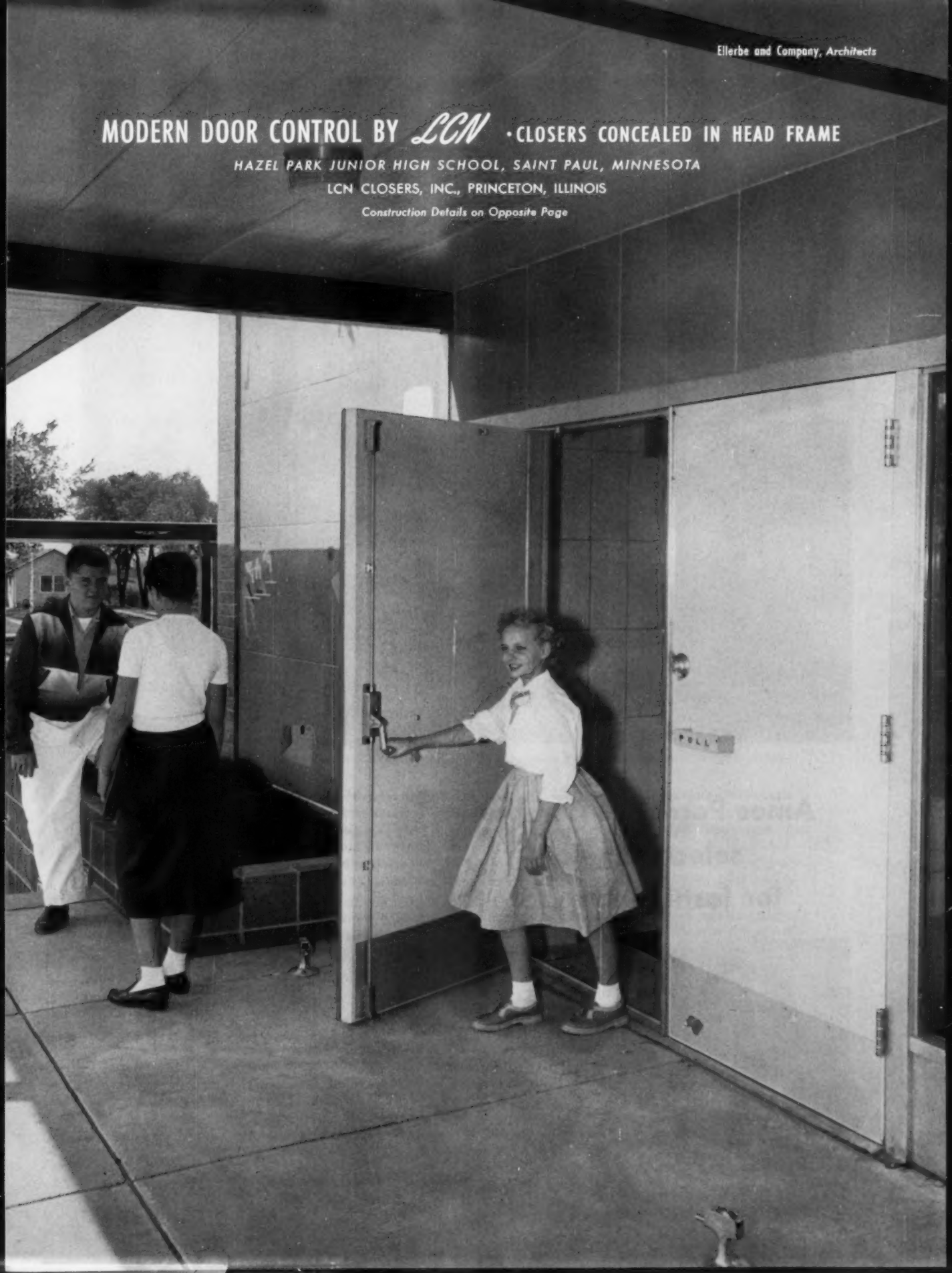
Ellerbe and Company, *Architects*

MODERN DOOR CONTROL BY *LCN* • CLOSERS CONCEALED IN HEAD FRAME

HAZEL PARK JUNIOR HIGH SCHOOL, SAINT PAUL, MINNESOTA

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Construction Details on Opposite Page



Amos Parrish & Company selects Bigelow for fashionable store

For over 35 years, Amos Parrish & Company has been noted for its success in the fields of retail merchandising consultation and store designing. And in designing store interiors, one of their foremost considerations has always been to achieve a pleasant, attractive atmosphere.

To do this, the selection of the right carpet was essential, both from the standpoint of appearance and wearing quality.

Mr. Pickering says this about the Bigelow Gropoint® Carpet used in the National Clothing Store:

James H. Pickering is Vice-President and Director of Store Design for Amos Parrish & Co., Inc., New York. The firm's most recent success is the interior of the National Clothing Store in Rochester, New York.

Other current design work includes the B. Altman & Company branch in Short Hills, New Jersey; a second suburban store for the Denver Dry Goods Company in Denver; a branch of Walker-Scott in San Diego, California; the 100,000-square-foot ground floors of the new Macy's on Long Island; and J. Fred Johnson Co., Kingsport, Tenn.

The distinctive and inviting interior of the National Clothing Store, Rochester, New York. Bigelow Gropoint is the carpeting.

"There is a dollar value in the kind of carpet that creates the right atmosphere for the store's interior —and also stands the rigid test of thousands of feet walking across it each day.

"In stores such as the National Clothing Store, the wear formula of Bigelow Carpet immediately recommends its use, especially in heavily trafficked areas. And Bigelow's trained specialists have often helped us find the best color and weave of carpet.

"We can report complete satisfaction with the use and performance of Bigelow Carpets."

Are you planning a carpet installation? Consult Bigelow's specialists at your earliest convenience for expert assistance in selecting the right carpet at the right price.

These experts will help you choose the most appropriate color, pattern and weave for your installation —within your budget's limitations.

Arrange for this convenient free service today. Simply contact the nearest Bigelow sales office—or write to the Bigelow Contract Dept., 140 Madison Avenue, New York 16, New York.

BIGELOW Rugs – Carpets

Bigelow... Number 1 name in Carpets

Bigelow sales offices are located in the following strategic cities: Atlanta, Ga.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Dallas, Tex.; Denver, Colo.; Detroit, Mich.; Hartford, Conn.; High Point, N. C.; Kansas City, Mo.; Los Angeles, Calif.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Penna.; Pittsburgh, Penna.; St. Louis, Mo.; San Francisco, Calif.;

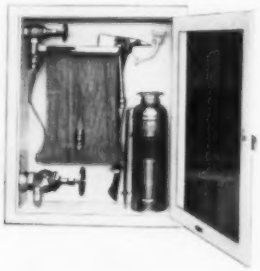
see our catalog in SWEET'S ARCHITECTURAL FILE 13L Bi or write for copy

ALLENCO

INTERIOR
FIRE PROTECTION
EQUIPMENT

designed to suit your design

COMPONENTS TO STANDARD "CUSTOM-SIZE" CABINETS AND COMPLETE SYSTEMS



Allenco fire equipment is designed and *proved* to meet 3 main requirements –

1. Utility –
fire regulations, insurance standards

2. Eye-tility –
unobtrusive in any setting, any structure

3. Economy –
saves time in specifying* and installing

**A.I.A. file 29e2 gives ready to use standard (and alternate) specifications for major items. Write for your copy. Meanwhile, check Sweets.*

Established 1887

W. D. ALLEN
MANUFACTURING CO.
Allenco Building • Room 702
566 West Lake Street
CHICAGO 6

(Continued from page 248)

Kitchen of Tomorrow. Electronics and ultrasonics are the kitchen wonders of tomorrow. This fact is forecast in Frigidaire's 1956 Kitchen of Tomorrow, an attraction of the 1956 General Motors Motorama. It offers the housewife a degree of convenience and design which is even more advanced than the first two experimental kitchens.

Shown in the foreground of the picture directly above is a rotating oven, covered with a double-wall glass dome, which will bake, broil or barbecue with the food in full view. Surface cooking is done on a marble countertop next to the oven. Small, flush target lights indicate where cooking utensils should be set, and induction heating coils under the marble do the cooking without heating the marble itself. A cabinet that rises automatically out of the countertop next to the range provides storage space.

Along the back wall is the food preparation center, in which electronics does a major part of the work. A "magic recipe maker" automatically selects and measures ingredients for particular dishes. A slotted recipe card when fed into the gray wall cabinet shown above, causes a printed recipe and a color picture of the completed dish to be flashed on the cabinet screen.

A movable chopping block rolls along the counter, can be locked in place at any point, and has a built-in household scale for weighing foods, packages, etc. A vegetable sink has a built-in spray for cleaning vegetables. Various other components, such as electric mixer, paper dispensers and knife rack, are either integral parts of the counter or can be raised or lowered from cabinets.

A rotating refrigerator is located at the left between the range and the food service center. Located in an outside wall, it has four compartments, each with a door, which can be loaded from the outside by a deliveryman and rotated for use by the homemaker. Ordi-

narily in the "down" position, as shown at left, with its top flush with cabinet countertops, it rises to waist-high position for use.

The dishwasher employs inaudible, high-frequency sound waves to clean china, glassware, etc. A new home laundry has three compartments, shown in picture below, which can be loaded by fabric types. When any section reaches 8½ lb, it automatically moves across the counter to the washing machine, selects the proper washing time and temperature, and loads the machine.

The planning center, to the right, features a television telephone which allows the housewife to see foods when placing orders, to watch other parts of the house and to receive regular TV programs. She can actuate a "hands-free" telephone simply by waving her hand, and can reach outside numbers by pushing buttons instead of dialing. A multiple message recorder will receive up to 30 messages. And to provide the ultimate in convenience, a remote-control signaling device which can be attached to the phone permits the housewife to perform various kitchen operations while she is shopping or playing bridge!

GM officials say that the idea kitchen, although a laboratory for testing advanced concepts in kitchen design and convenience, is an actual operating kitchen, and various of its components may be produced sometime in the near future.

Dictionary of Color Names. *The ISCC-NBS Method of Designating Colors and a Dictionary of Color Names*, by Kenneth L. Kelly and Deane B. Judd, not only serves as a record of the meanings of 7500 individual color names but also enables one to translate from one color vocabulary (for example, the vocabulary of art, science, industry, etc.) to another. NBS Circular 553. 158 pp. $2. Available from *Government Printing Office, Washington 25, D. C.*

(Continued on page 256)

FOG NOZZLE

TYPICAL OF

ALLENCO

PRODUCTS, BETTER BY DESIGN

Water fog protects user by promptly dispersing smoke and gases, reducing heat, minimizes water-damage and smothers fires. Allenco Fig. 7171 was developed for *interior* hose units, working on pressures as low as 25 pounds and also over 125 pounds.

SPECIFICATIONS:

Precision machined cast brass throughout; stem and deflector head manganese bronze; oil resistent neoprene packing adjusts for wear; 1½ inch, specified thread; polished brass or chromium finish. (table)

See how it meets the 3 main requirements—

1. Utility—

Listed and approved for class A (ordinary) and Class B (oil, flammable liquids, etc.) fires. Fast "wrist-twist" adjustment from Off through Full Steam, to 60° conical fog. Teeth can't clog.

2. Eye-tility—

Compact "functional" shape; uniform high-polish finish.

3. Economy—

Surprisingly low priced, considering essential precision work; requires no maintenance; serves indefinitely; kills fires that ordinary nozzles can't.

Write for your NEW copy of ALLEN on Interior Fire Protection (A.I.A. file 29e2) No. 150 Meanwhile check Sweets'.

W. D. ALLEN MFG. CO.

566 West Lake Street • Allenco Building • Rm. 702

CHICAGO 6

Excellent use is made here of Truscon Intermediate Projected Steel Windows. Fontenelle Elementary School, Omaha, Nebraska; Wallace & Burrill, Inc., Architects; Parsons Construction Company, Contractors.

Floors in the Dutch Broadway High School, Elmhurst, N. Y., are made lightweight and fire-resistant with Truscon "O-T"® Open Truss Steel Joists. Here are strength and safety at low cost per square foot. Do you know about Truscon's new Clerespan® Steel Joist, 96 feet long? Send coupon for details.

These Republic Standard Single-Tier Lockers serve students in the Abraham Lincoln High School in Philadelphia, Pa. Fabricated at Republic's Berger Division, they're part of a big line of steel lockers for every school or factory requirement. Mail coupon for complete data.

REPUBLIC

REPUBLIC STEEL

World's Widest Range of Standard Steels

TRUSCON STEEL WINDOWS

Daylight Omaha's New Fontenelle School

Classrooms today are brighter, lighter, and more cheerful thanks to the increased use of windows in school construction. Outside walls, once with limited glass area, are now fabricated almost entirely from windows with the *strength of steel.* The result is better over-all illumination—and vastly improved ventilation.

A splendid example of this new trend in school design is Omaha's beautiful Fontenelle Elementary School, in which two important Truscon Steel Window types were used.

The classrooms, for example, were well-daylighted by Truscon Intermediate Projected Windows that can be custom-built to exact specifications. Specially rolled solid steel sections of original design provide advantageous weathering and attractive appearance. Upper lights can be glazed with one of several types of light-diffusing, glare-reducing or heat-absorbing glass.

Fontenelle's beautiful new gymnasium is equipped with Truscon Donovan Awning Windows that offer superb lighting and ventilation without drafts. Ventilators which operate in unison, either by mechanical control or completely concealed operators, permit ventilation in inclement weather.

These are but two of the many types of Truscon® Steel Windows currently being specified for school construction. Others are: Double-Hung Steel Windows; Intermediate Combination Windows; Maxim-Air® Steel Windows; Truaire® Windows; Architectural Projected Windows. Ask your Truscon representative or send coupon below for details and specifications. Also in Sweet's File.

These handsome Donovan Awning Windows are perfect for gymnasiums. Teacher at Fontenelle Grade School in Omaha is shown regulating them for proper ventilation.

STEEL

and Steel Products

REPUBLIC STEEL CORPORATION
Dept. C-1378
3110 East 45th Street
Cleveland 27, Ohio

Please send me additional information on the Republic Steel Building Products indicated:

☐ Intermediate Projected Windows ☐ Steel Joists
☐ Donovan Windows ☐ Lockers

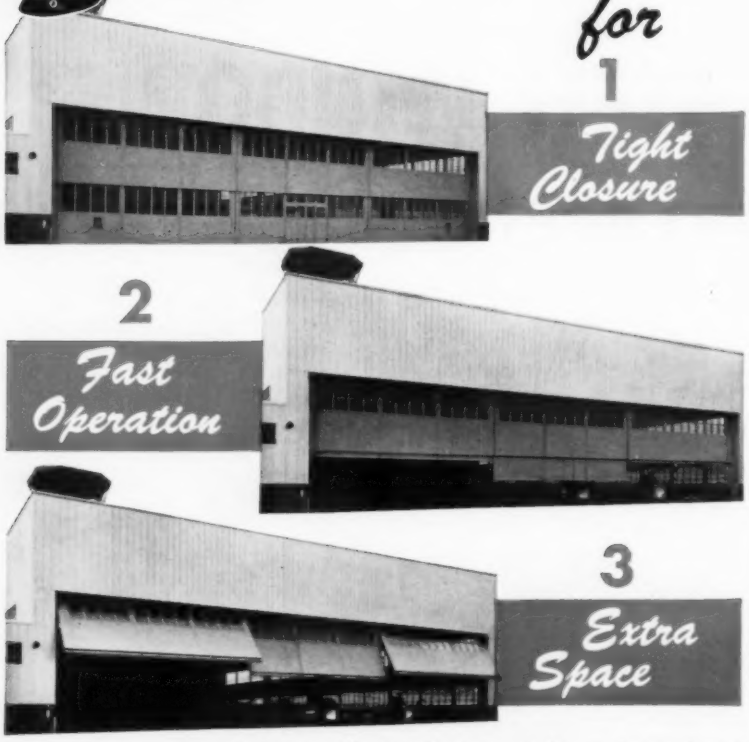
Name_____ Title_____

Company_____

Address_____

City_____ Zone____ State_____

Specify BYRNE doors for



Architect—Albert Kahn Assoc. Archts. & Engrs., Detroit
Contractor—E. & F. Construction Co., Bridgeport, Conn.

Sikorsky Aircraft enjoys all of these benefits and more with this installation of Byrne Vertical Lift Canopy Doors at Stratford, Connecticut.

In addition to being weather-tight, with initial savings in heating plant investment and subsequent fuel savings, Byrne Doors are structurally sound. They offer complete safety through multi-cable, balanced suspension and rigid construction that withstands hurricane wind velocities. Automatic, self-locking operator mechanisms and overload relays protect personnel, valuable equipment, and the doors themselves.

Swift operation uses minimum operating power, while maintenance costs have run less than ¼ of 1 per cent a year on similar installations. The space-saving design of Byrne Doors permits full use of the enclosed working area and forms a canopy which actually adds to the effective working space during most weather.

This installation consists of three Byrne Vertical Lift Canopy Doors, each 57′4″ x 36′. They are made in sections, and can be operated individually or simultaneously. Byrne's more than 25 years' experience in door design, construction and erection is at your service.

Free Catalog

Complete line of industrial and hangar doors for every need . . . for openings up to 55′ high by 150′ wide. Write for your copy now!

BYRNE doors, inc.

1603 E. 9 Mile Road, Ferndale, Detroit 20, Mich.
101 Park Ave., New York 17, N.Y.
Dept. r-15 Cafritz Bldg., Washington 6, D.C.
Byrne Doors, Ltd., 61 Avenue Road, Toronto, Ont.

TECHNICAL ROUNDUP

(Continued from page 253)

Low-Power Military Package Reactor to Be Developed

The design and development of a low-power, military, nuclear reactor plant for the production of electricity and for space heating has been authorized by the Atomic Energy Commission. The Argonne National Laboratory in Lemont, Ill., has been commissioned to design a plant which will produce a combined electrical and heat energy output of several hundred kilowatts and which will be a prototype of nuclear plants for use in remote areas by the military services. The primary design objectives of the ALPR (Argonne low-power reactor) are simplicity of the system, ease of transportability, ease of operation so that the number of operating personnel required can be held to a minimum, and operation for extended periods of time without maintenance.

Basically the reactor will consist of a pressure vessel containing an assemblage of enriched uranium fuel elements and a number of neutron-absorbing control rods submerged in water. The water will circulate through the reactor core by natural convection. Steam produced by the heat created by the fission of uranium atoms will be conducted directly to a turbine-generator.

Steel H-Beam Pilings can be used safely as foundations for Chicago skyscrapers, according to the results of a study conducted by Armour Research Foundation of Illinois Institute of Technology. The traditional method of supporting large buildings in the Chicago Loop area has been to use concrete caissons. Results of the Armour study show that a 14-in. steel H-beam pile driven 105 ft to bedrock withstood more than three times the design load before failing at 635 tons of force, according to Dr. Robert L. Janes, assistant manager of the Foundation's propulsion and structural research department. Chicago building codes generally specify that if a building foundation is to support a given weight, it must support twice that weight for a specified length of time.

The Plumbing Brass Institute has been organized by 30 manufacturers, with A. H. Goepel of Scovill Mfg. Co. as the first president. The new association is located at 1 Gateway Center, Suite 759, Pittsburgh 22, Pa.

Major wall areas of Glass Blocks provide maintenance-free daylight

When the designers of Philadelphia Electric Company's Cromby Station considered plans that called for a quarter acre of daylighting, they immediately recognized the need for minimizing maintenance. With such a vast area, sash repair, window cleaning, storm damage, painting, or any other type of maintenance could present major cost items.

They found the answer in PC Glass Blocks. Installed in giant panels on the north and south elevations, the 12-inch *light-diffusing* glass blocks provided other benefits, too. Daylight is glare-free. Excessive heat gain, which could hamper operations, is controlled. And the bold use of the blocks creates an attractive and modern exterior.

For product information, write or see us in Sweet's. Pittsburgh Corning Corporation, Dept. B-56, One Gateway Center, Pittsburgh 22, Pa. In Canada: 57 Bloor Street West, Toronto, Ontario.

Philadelphia Electric Company's new 350,000 kw Cromby Station, Cromby, Pa.
Consulting Architects:
Harbeson, Hough, Livingston, & Larson, A.I.A.
Philadelphia, Pa.
Engineering and Design:
Philadelphia Electric Company
Philadelphia, Pa.
Mason Contractor:
John B. Kelly, Inc.
Philadelphia, Pa.

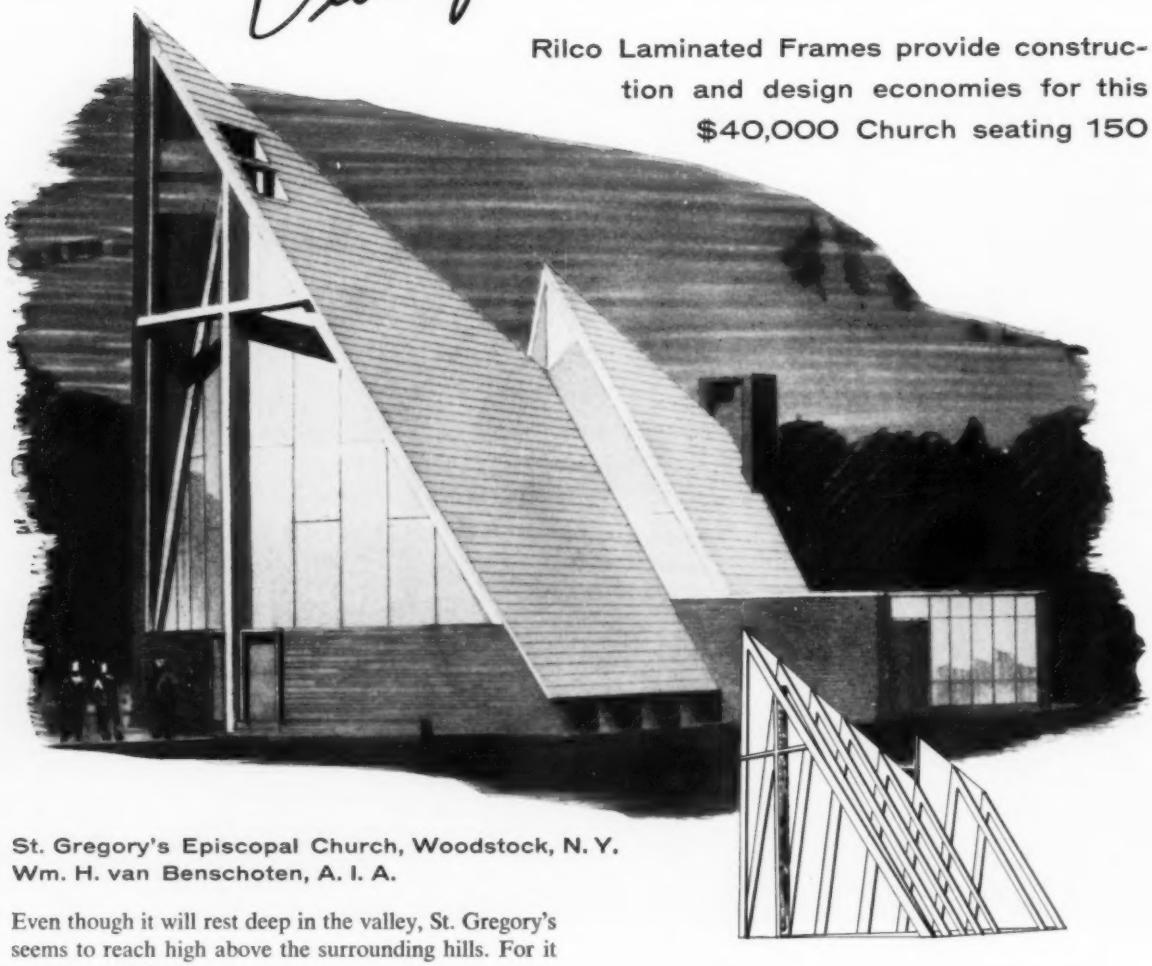
PC Glass Blocks

PITTSBURGH PC CORNING®

Also manufacturers of FOAMGLAS® insulation

Beauty on a budget

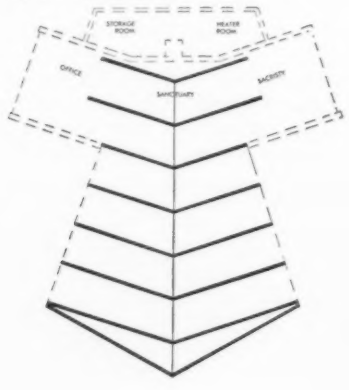
Rilco Laminated Frames provide construction and design economies for this $40,000 Church seating 150



St. Gregory's Episcopal Church, Woodstock, N. Y.
Wm. H. van Benschoten, A. I. A.

Even though it will rest deep in the valley, St. Gregory's seems to reach high above the surrounding hills. For it was planned that way.

So intriguing was this design that we couldn't wait for photos of the finished job. And Rilco Glued Laminated Structural Members so perfectly carried out the desired effect that they were specified throughout — chosen not only for their warmth and flexibility, but for economy plus ease and speed of erection.



BLOCK FLOOR PLAN

No matter how unusual your design, Rilco Glued Laminated Wood Arches, Beams and Trusses will faithfully portray the desired effect at a saving. You will be pleased, too, with the beauty of 4″ x 5″ Rilco Red Cedar Deck which combines roof insulation and ceiling finish in one economical application.

Rilco engineers will gladly work with you on your requirements and give on the job cooperation. For there's a cost-saving Rilco member for every type of structure, precision built to meet your needs. Just write . . .

RILCO
works wonders with wood

RILCO LAMINATED PRODUCTS, INC.
2518 1st NATIONAL BANK BUILDING ST. PAUL 1, MINNESOTA
District Offices: Wilkes-Barre, Pa.; Fort Wayne, Ind.; Tacoma, Wash.

FORMICA® is a "fixture" wherever things are sold

Today the architect's influence has extended the use of Formica laminated plastic surfaces far beyond structural decoration and built-in equipment.

Formica French Blue #928 on both horizontal and vertical surfaces of these beautiful and functional fixtures in this new department store was architect specified as a part of the complete interior design job.

Formica is now being widely specified in all types of commercial and institutional buildings for two very important reasons. First, it is by far the easiest type of material to maintain. Secondly, beautiful Formica colors can be applied to walls, window sills, stairways, office interiors, and all types of fixtures and furniture.

For your copy of the Formica Commercial Applications Kit call your local Formica Office or write The Formica Company, 4632 Spring Grove Avenue, Cincinnati 32, Ohio.

Customers buy Formica because it is a brand name they know and trust.

DEMAND THIS CERTIFICATION

We protect this faith in our product by certifying every sheet with a wash-off Formica marking. It is for your protection and guarantee that you are getting genuine Beauty Bonded Formica.

This mark certifies genuine

RUB OFF WITH LOTS OF BAR SOAP ON A DAMP CLOTH

Beauty Bonded FORMICA® Laminated Plastic Pays in Performance

Guaranteed by Good Housekeeping

Seeing is believing. If this wash-off identification is not on the surface, it's not FORMICA.

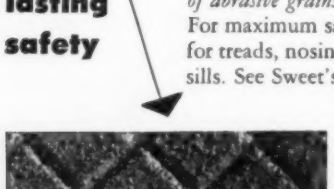
FERALUN® SAFETY TREADS

give 33 years of service at RCA

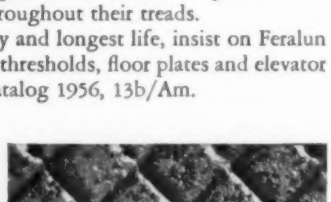
Here's proof of Feralun durability! These treads were installed in the Camden, New Jersey plant of the Radio Corporation of America, *when the building was erected in 1923—over 33 years ago.* After recent inspection, RCA reports, "The Feralun Treads are still in use and have given us satisfactory service to date."

Why FERALUN provides lasting safety

This is a typical example of the long life and economy of Feralun Safety Treads. The reason? Quality manufacturing methods assure full and even distribution of abrasive particles throughout the wearing surface. In fact, American Abrasive Metals Company is the *only* manufacturer who guarantees *the amount of distribution of abrasive grains* throughout their treads.
For maximum safety and longest life, insist on Feralun for treads, nosings, thresholds, floor plates and elevator sills. See Sweet's Catalog 1956, 13b/Am.



Here is an unretouched photograph of a *Feralun* tread taken after acid treatment. (Acid is used to eat away the metal base so as to isolate the actual abrasive content of the tread.) Note the full and even distribution of abrasive—for greater, safety, longer wear.



Here is an unretouched photograph of an abrasive tread, purchased on the open market of the type often offered as an equal of Feralun, after the identical acid test. Note the meager amount of abrasive and spotty distribution.

AMERICAN ABRASIVE METALS CO., IRVINGTON 11, N. J.

PRODUCT REPORTS

(Continued from page 237)

Sealant. Airtight and watertight seal for wood, masonry, ceramic and metal surfaces is guaranteed by the manufacturer to be 100 per cent effective. Intended particularly for sealing cracks in basement walls, floors, concrete patios and walks, *Metaseal Masonweld*, a thermosetting resin, is resistant to most acids, alkalis and solvents, and is unaffected by freeze-thaw cycles. *American Metaseal Mfg. Corp., West New York, N. J.*

IM-Pak Blower reportedly can handle 98 per cent of all residential and commercial air moving applications because of an interchangeable mounting that enables it to be used in any of four positions. The unit is available in various sizes from 9 to 16 in. *Utility Fan Corp., 1111 Wilshire Boulevard, Los Angeles 17, Calif.*

Mineral Fiber Acoustical Tile, rated incombustible under Federal specifications, is available in two sizes; 12 by 12 in. and 12 by 24 in., and is 5/8 in. thick. *Crestone* may be installed by cementing or by mechanical suspension. If the latter method is used, the tiles may be kerfed and back-cut for use with conventional suspension systems. *Armstrong Cork Company, Lancaster, Pa.*

(Continued on page 264)

CUT ALONG DOTTED LINE AND SAVE FOR YOUR FILE

A.I.A. FILE NO. 15-M-1

DESIGN STUDY
NUMBER

STANDARD TOOL COMPANY
Detroit, Michigan

Architect: Louis G. Redstone, AIA — Detroit, Michigan

Davidson "Double-Wall" Type "C" Porcelain Panels — Distributed and Erected by: The D. G. Garrison Company, Detroit, Michigan

TODAY the architect's building design is the result of coordinated planning to insure that every practical requirement is considered.

Significantly too, the above building design includes Davidson Architectural Porcelain — a material that is maintainance-free as well as offering flexibility to the architect's design. Whatever the application of architectural porcelain, you can rely on Davidson's experience to bring you the utmost in modern porcelain panels to effectively meet your design requirements.

DAVIDSON ENAMEL PRODUCTS, INC.
1106 EAST KIBBY STREET • LIMA, OHIO

Member Producers' Council

Davidson

DAVIDSON ARCHITECTURAL PORCELAIN

ARCHITECTURAL PORCELAIN

the modern building material . . .
engineered for Architects

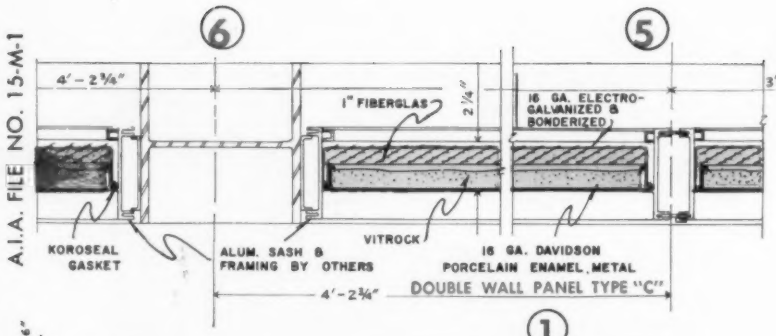
See next page for study of porcelain construction details of the building shown above.

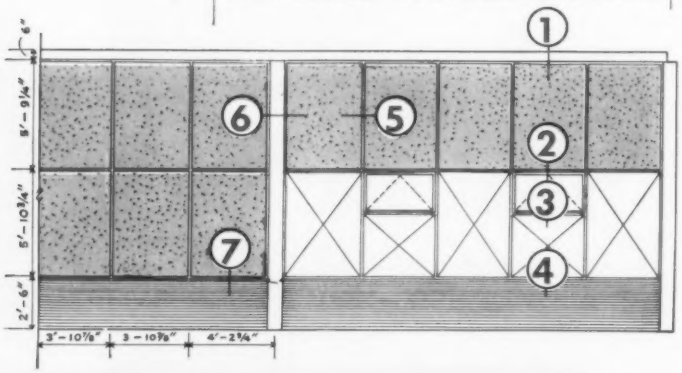
Watch for Design Study Number 2 which will appear in this publication in Aug.

A.I.A. FILE NO. 15-M-1

CUT ALONG DOTTED LINE AND SAVE FOR YOUR FILE

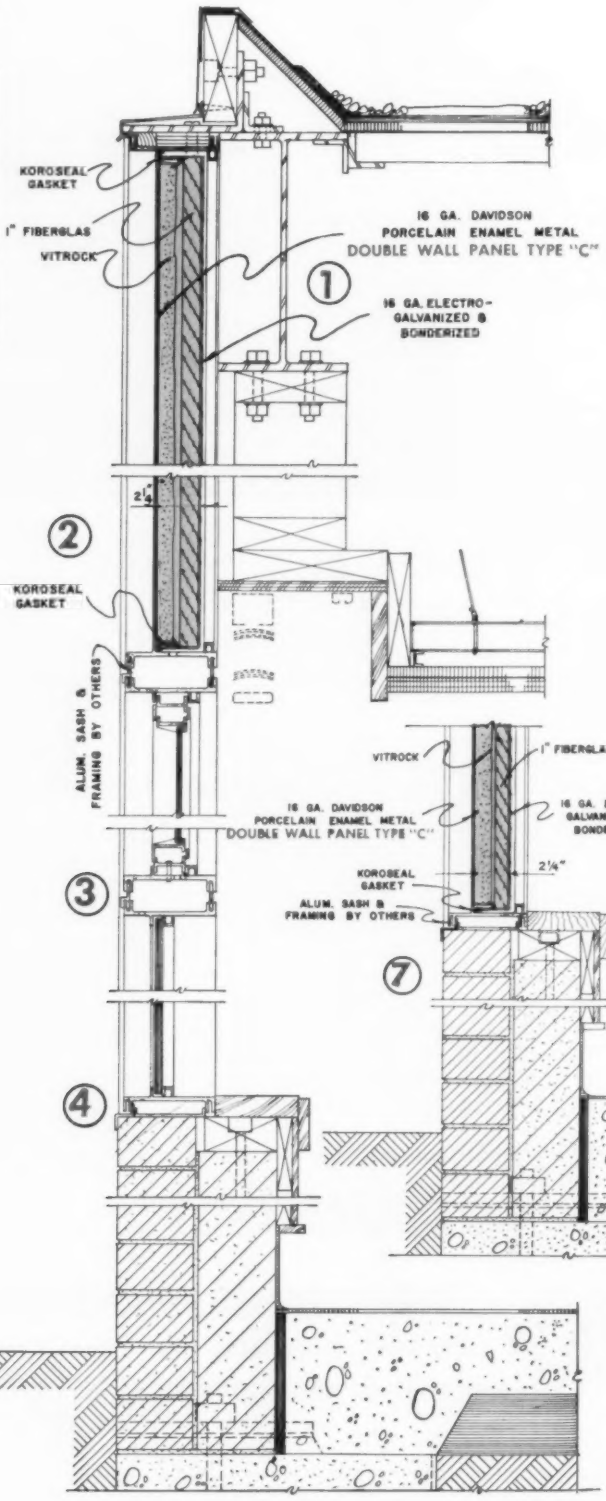
A.I.A. FILE NO. 15-M-1





DESIGN STUDY NUMBER 1

Davidson "Double-Wall" TYPE "C" Porcelain Panel



CUT ALONG DOTTED LINE AND SAVE FOR YOUR FILE

DESIGN STUDY 1

DAVIDSON ARCHITECTURAL PORCELAIN

DESIGN & DETAIL STUDY OF ARCHITECTURAL PORCELAIN

Standard Tool Co., Detroit, Michigan

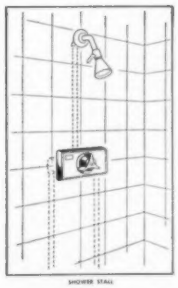
For further information on the application of Davidson Architectural Porcelain check the following:

- ☐ Full scale drawings showing the application of Architectural Porcelain for the Standard Tool Company, Detroit, Michigan
- ☐ Detailed, 16-page Architectural Catalog, 1956 Edition
- ☐ Porcelain Panels for Store Fronts
- ☐ Porcelain Panels for Shopping Centers
- ☐ Porcelain Panels for Schools
- ☐ File of Typical Construction Details
- ☐ Reference File Jacket on Architectural Porcelain
- ☐ Reprints of this Study #1. Quantity _____

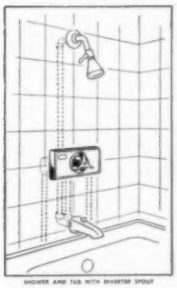
DAVIDSON ENAMEL PRODUCTS, INC.
1106 E. KIBBY STREET, LIMA, OHIO

A.I.A. FILE NO. 15-M-1

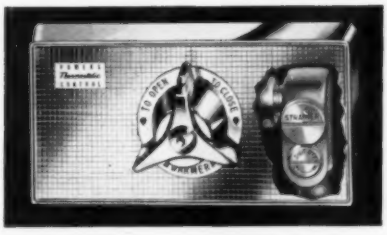
More POWERS to You for BETTER Showers



HYDROGUARD has a built-in shut-off valve therefore none is required between it and the shower head.



For Shower Singing Comfort and Real Safety



Specify **POWERS**

New **Hydroguard®**

–the finest **thermostatic** shower control made for homes, clubs, schools, hotels and hospitals

Hydroguard Styling Simplifies Shower Installation

Don't Skimp on Safety in Showers
Get POWERS
SAFE SHOWER SYSTEMS data.
Call your nearest Powers office.

HYDROGUARD
Is Nationally Advertised

(c63a)

More Convenient–there's only ONE dial to turn. Note uncluttered simplicity of installations above. Powers Triple duty Strainer-Check-Stops concealed behind the HYDROGUARD cover, simplify piping and tile work. Walls are unmarred by protruding knobs or 2 to 4 valve handles. There's no confusion.

You Can Really Enjoy Worry-Free Bathing in perfect comfort in a HYDROGUARD shower. Temperature stays where you set it regardless of *pressure* or *temperature* changes in water supply.

Thermostatic SAFETY-LIMIT Protects Children from Scalding. It prevents flow of water to shower or tub above 110°F. If cold water supply fails HYDROGUARD instantly shuts off the shower.

Phone or Write our nearest office for Bulletin 366

THE POWERS REGULATOR COMPANY

SKOKIE, ILLINOIS | *Offices in chief cities in U.S.A., Canada and Mexico*

65 Years of Leadership in Water Temperature Control

From the desk of Ed Devine, E.E.
To: M. G. Gordon, Sales Rep., Pass & Seymour, Inc.

Monty, can P+S solve these problems?

1. Need switches for those luxury homes in Danforth. Want to show quality of job with eye-catching, top quality wiring devices. Should be good enough for a sales feature, and show them we thought of details. By the way, keep the price down.

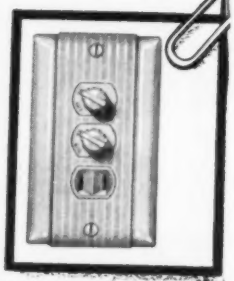
2. Need special, heavy-duty switches for factory job. 15 amps on A.C. current. Handle full rating up to 277 volts on fluorescent loads.

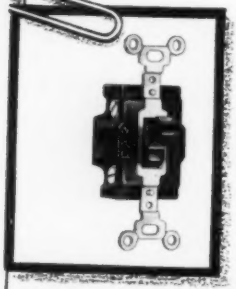
3. Looking for best three-wire grounding outlet for special equipment. Should be convertible to 2-circuit.

4. I bid low on residential job. Have to make profit in speed - cut down labor costs. Want to use the best. What about those screwless terminal jobs?

From the desk of ... M. G. GORDON
To: Ed Devine

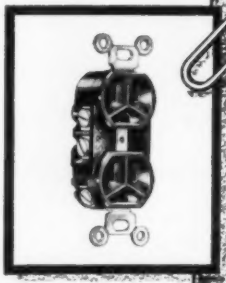
1. No problem here! Just use P&S ROTO-GLO®. Glows in dark, whisper quiet, exclusive roto action, has tremendous sales appeal. Only pennies more per switch.

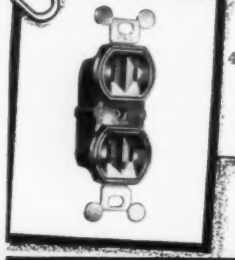




2. P&S can do! Check specs on 15AC1 (single pole). Also check double pole and three-way versions. (Got them at 20 amp rating, too.)

3. The best in 3-wire is this 5262 - easy back or side wiring. Grounding blade can't engage "hot" contacts. Converts to 2-circuit by breaking connection between binding screws.





4. P&S 1500 is the one to use! Perfectly insulated, with double, torsional contacts for low heat. Just two steps for fast, simple wiring (even has strip gauge molded in).

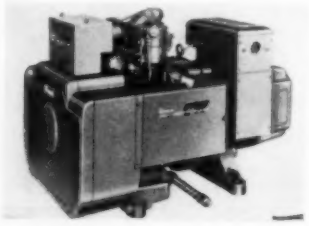
For the solution to all your wiring device problems send us a memo, or write today for the latest catalog to Dept. AR-12.

PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK
71 Murray St., New York 7, N.Y. 1229 W. Washington Blvd., Chicago 7, Ill.
In Canada: Renfrew Elec. & Refrig. Co., Ltd., Renfrew, Ontario

PRODUCT REPORTS

(Continued from page 260)

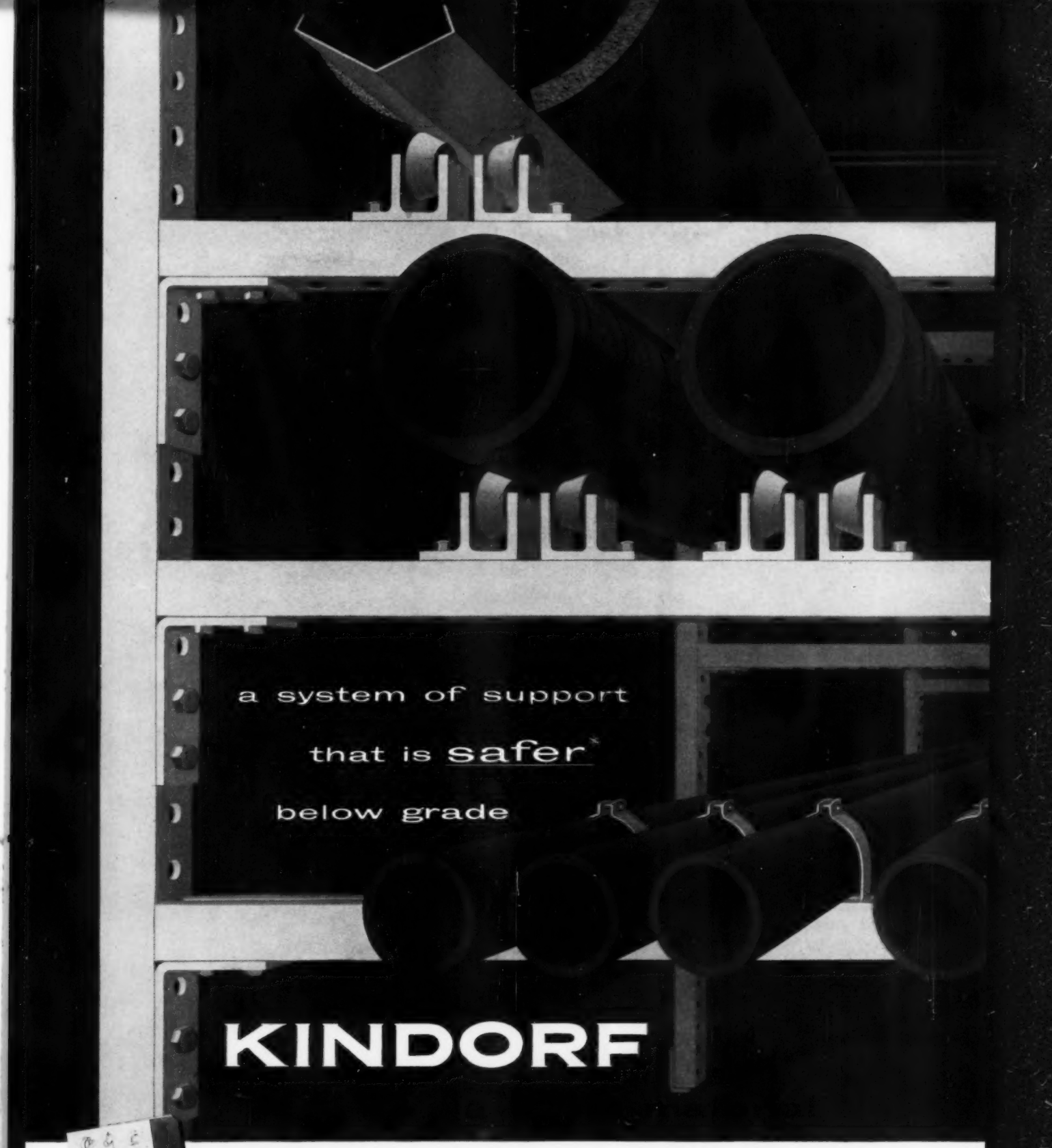
Vibration Mounting. Heavy machinery weighing up to 300,000 lb can now be mounted on only four of these special shock mounts without special chasses or foundations being necessary. The *SK/ 50,000 Vibro-Isolator* is rated at 75,000 lb for steady running applications and 50,000 lb for impact applications. *The Korfund Co., Long Island City, N. Y.*



Gasoline Powered Generator rated at 7.5 kw, has a forced air cooling arrangement. The *Vacu-Flo* cooling system employs a centrifugal blower that pulls cold air through the generator and over the heated engine parts, then expels it through a duct to the outside. This allows the unit to be installed in a completely enclosed space, with allowances for an air intake vent and an exhaust outlet. *D.W. Onan & Sons, Inc., Minneapolis, Minn.*

Fire-resistant Plastic Panels for use where fire codes prohibit use of panels made of conventional resins have a flame-spread rating of 40 to 75. The translucent panes can be used in windows, skylights and the like. *Filon Plastics Corp., 2051 E. Maple Ave., El Segundo, Calif.*

(Continued on page 268)

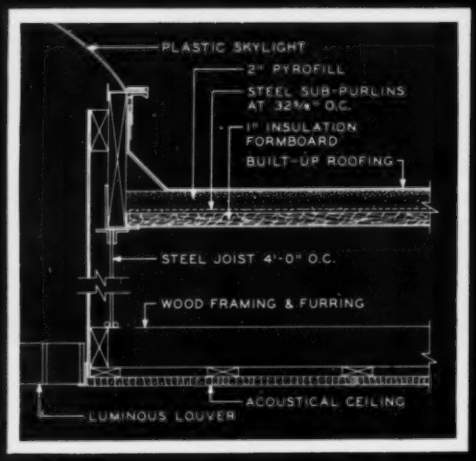


*The Galv-Krom finish has built-in rust resistance

A PRODUCT OF **STEEL CITY** ELECTRIC COMPANY

Send for the Kindorf catalog

PITTSBURGH 33, PA.



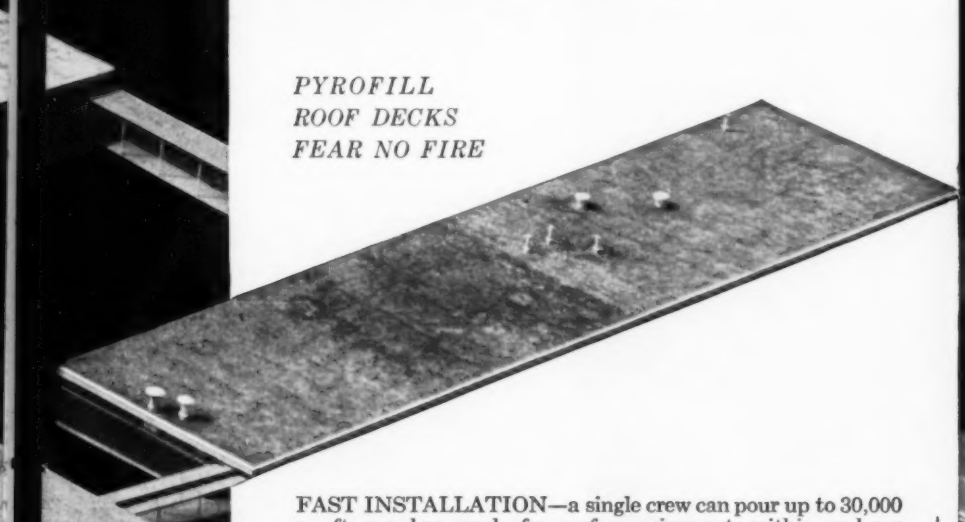
J. R. Moore Junior High School, Tyler, Texas • Architect—Caudill, Rowlett & Scott, Bryan, Texas • Associate Architect—Bruce & Russell, Tyler, Texas • General Contractor—Clanahan Construction Co., Tyler, Texas
Roof Deck Contractor—Macatee, Inc., Dallas, Texas

School design objectives are economically achieved with

PYROFILL*
ROOF DECKS

Integration of design among a group of decentralized classroom units was the objective here. It was economically accomplished with the help of PYROFILL incombustible gypsum, especially adaptable to the continuous, unifying roof design. PYROFILL was poured in place at low cost over permanent formboards with valuable insulating properties. PYROFILL also has all the other outstanding advantages listed below.

PYROFILL
ROOF DECKS
FEAR NO FIRE



FAST INSTALLATION—a single crew can pour up to 30,000 sq. ft. per day, ready for roof covering; sets within an hour to carry normal construction loads.

INCOMBUSTIBILITY—made of fireproof gypsum; often permits savings of 30% or more on insurance.

LIGHTWEIGHT— only 10 to 12 lbs. per sq. ft. Permits important savings in structural steel and footings.

STRENGTH, DURABILITY—have a safety factor of 10 or more under normal roof loads. Decks erected over 30 years ago still give excellent service.

STRUCTURAL RIGIDITY—bulb tee sections reinforce slab and along with incombustible gypsum provide lateral stiffening of structural steel framing.

For further information refer to Sweet's Catalog, Section $\frac{2e}{Un}$, *or contact your U.S.G. Architects Service Representative, or write Dept. AR 1, 300 West Adams Street, Chicago 6, Illinois*

*T.M. Reg. U.S. Pat. Off.

USG
UNITED STATES GYPSUM

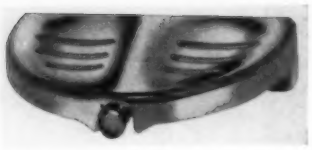
UNITED STATES GYPSUM
The Greatest Name in Building

PRODUCT REPORTS

(Continued from page 264)

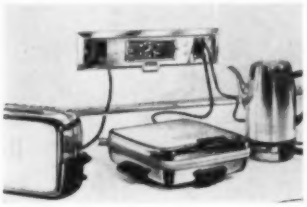
Heating-Cooling. Self-contained air conditioning and heating unit is specifically designed to permit quick modernization of hotel and motel rooms without interrupting normal service. The unit fits into an outside wall, connects with existing heating systems while adding air conditioning, and takes only one to two days to install. Each unit can deliver from 3,000 to 18,000 Btu, the capacity being tailored to the requirements of the particular room. Measuring 40 by 25 in., the unit is built to fit under any windowsill. Since it is meant to replace the radiator, no additional space is lost. *Amic Mfg. Corp., Long Island City, N. Y.*

Soap Dispenser Shelf. A combination gravity-fed soap-dispensing system and shelf, designed for installation in public washrooms and shower rooms, eliminates the necessity for providing two separate installations. The *Lava-Mates* system, available with either a "straight liquid" or "lather forming" valve, is produced



for concealed or exposed pipe installations. The cast bronze semi-circular shelf is chromeplated. *American Dispenser Co., Inc., 115 East 23rd St., New York 10, N. Y.*

Winter Air Conditioner. The new *Highboy* Model JGF-O in the Parkway Series, rated at 95,000 Btu input, has a two-tone jacket of gray and blue-green, with a louvered access panel. Occupying little more than 4 sq ft of floor space, the unit can be installed in closet or alcove. The return air duct can be connected to the base or to either side. All serviceable parts are accessible from the front. *The Heil Co., Milwaukee 1, Wis.*



Electropanel, a new electric appliance center for the home, converts 220-volt service to 110 volts so that four appliances can be used at one time without danger of overloading circuits or blowing fuses. The unit, 17½ in. wide by 4¾ in. high, provides two duplex receptacles, with three normal outlets and one timed by a centered clock. Although designed primarily for kitchen installation, it can be installed also in the recreation room, porch, breezeway or terrace. *Globe American Corp., Merchandise Mart Plaza, Chicago 54, Ill.*

(Continued on page 272)

On the new Ohio Turnpike

Looking east toward Eastgate Terminal, the entrance into Ohio from Pennsylvania Turnpike

Photos courtesy Ohio Turnpike Commission

Food, motor fuel and opportunity to relax are offered motorists using the new Ohio Turnpike, now open throughout its 241-mile length. There are 16 service plazas, consisting of restaurants and service buildings, open 24 hours a day. In many of these plazas, Halsey Taylor Coolers were installed, affording the utmost convenience and sanitation. In the choice of this equipment, as in every phase of this great project, safety was the watchword! The Halsey W. Taylor Company, Warren, O.

Typical Service Plaza, located at convenient intervals along the Ohio Turnpike

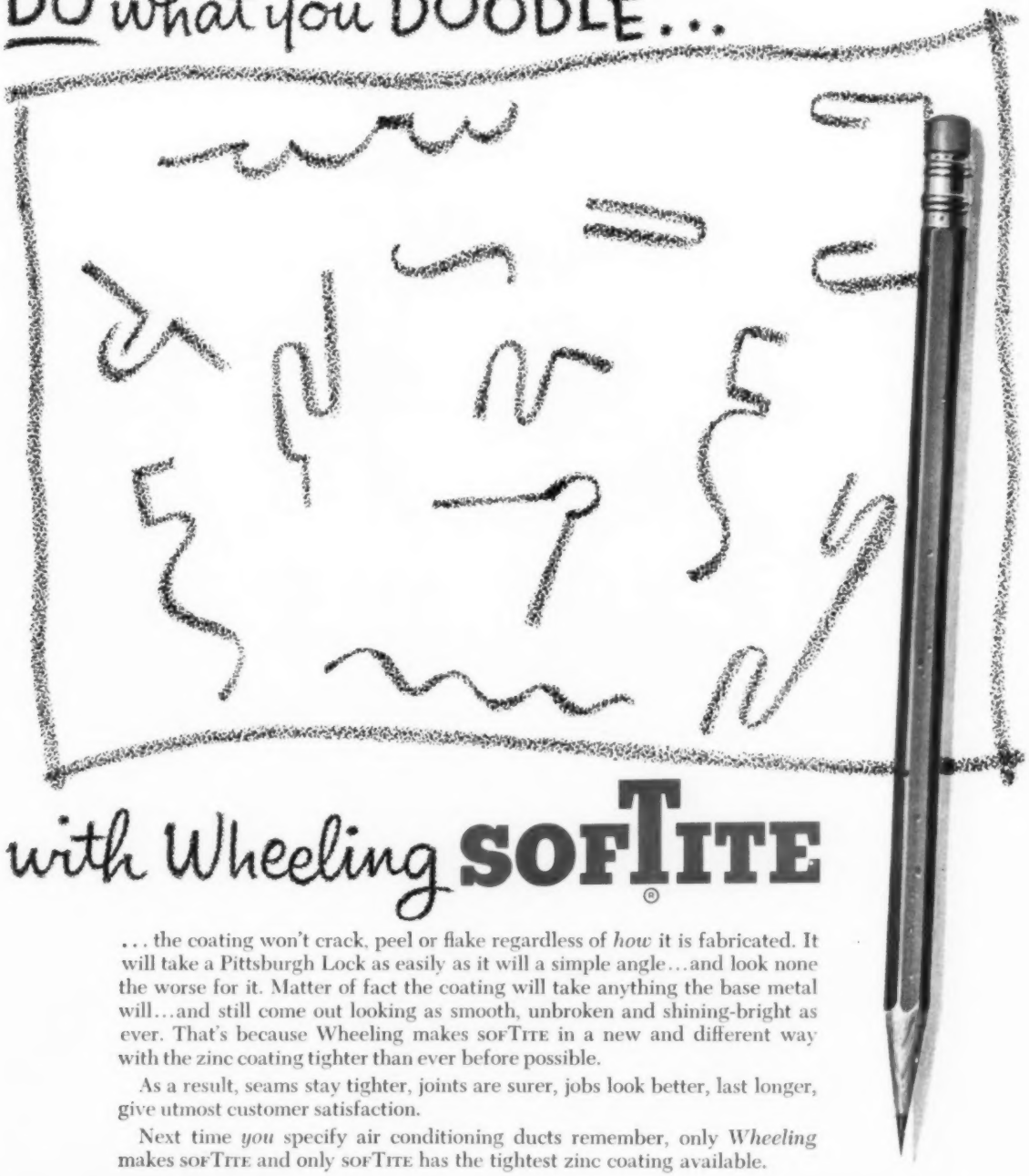
SEE OUR CATALOG IN SWEET'S

HALSEY® TAYLOR
Fountains and Coolers

...The Favorite Specification

A-62

DO what you DOODLE...



with Wheeling SOFTITE®

... the coating won't crack, peel or flake regardless of *how* it is fabricated. It will take a Pittsburgh Lock as easily as it will a simple angle...and look none the worse for it. Matter of fact the coating will take anything the base metal will...and still come out looking as smooth, unbroken and shining-bright as ever. That's because Wheeling makes SOFTITE in a new and different way with the zinc coating tighter than ever before possible.

As a result, seams stay tighter, joints are surer, jobs look better, last longer, give utmost customer satisfaction.

Next time *you* specify air conditioning ducts remember, only *Wheeling* makes SOFTITE and only SOFTITE has the tightest zinc coating available.

Ducts made of Wheeling SOFTITE *have tighter seams and joints because there is never any chipping or flaking of the coating.*

The full-line of Wheeling Building Products includes Metal Lath and Accessories, SOFTITE Cop-R-Loy Galvanized Sheets, Steelcrete Reinforcing Mesh, Steelcrete Bank Vault Reinforcing, Expanded Metal, ExM Gratings, ExM Angle Frame Partitions and Tri-Rib Steel Roof Deck.

Wheeling

WHEELING CORRUGATING COMPANY • BUILDING MATERIALS DIVISION
WHEELING, WEST VIRGINIA

ATLANTA BOSTON BUFFALO CHICAGO COLUMBUS DETROIT HOUSTON KANSAS CITY
LOUISVILLE MINNEAPOLIS NEW ORLEANS NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

For the

ultimate in distinguished interiors

EBBTONE®

Acoustical tile

Those who design with clean, sculptured forms and sharp contrasts will find in Ebbtone a material of classic beauty. Here is a richness and elegance new to tile—in its impeccable whiteness, in its subtle textures, in a finish of fabric-like softness and depth. This is unquestionably today's most beautiful acoustical tile. Yet Ebbtone offers more than beauty. Its foamed, completely mineral composition combines a light reflectant value of 81%, maximum acoustical and insulating efficiency, and its fire hazard classification as per Underwriters' label shown below is rated incombustible by building codes and insurance rating bureaus. And should painting ever be required Ebbtone can be painted with a non-bridging paint without materially changing its acoustical characteristics.

Specify Ebbtone as the crowning glory for your finest interiors. Its chaste, classic beauty is the perfect foil for a decor of any mood, or period or color.

For client presentations request matched panels exhibiting the several Ebbtone finishes available.

FOR IRREGULAR SURFACES SPECIFY CORALUX-ACOUSTICAL PLASTER, THE PERFECT COMPLEMENT TO EBBTONE.

EBBTONE Acoustical Tile is available factory kerfed, beveled and backcut for suspension systems, or may be applied with approved adhesive according to manufacturer's specifications. Ebbtone is available in 12″ x 12″ and 12″ x 24″ sizes.

APPROVED by the Board of Standards and Appeals for use in New York City under Cal. No. 463-53-SM.

F. E. Schundler & Company, Inc.

504 RAILROAD STREET • JOLIET, ILLINOIS

RATED FIREPROOF MATERIALS, ACOUSTICAL & INSULATING

Developers and producers of incombustible mineral products including Ebbtone Acoustical Tile, Fesco Insulation Board, Coralux Acoustical Plaster, Coralux Perlite Aggregates, Mica Pellet Vermiculite, High Temperature Insulating Blocks and Insulating Cement.

ABSORPTION COEFFICIENTS OF EBBTONE ACOUSTICAL TILE

Test Number	Unit Size Tested	Wgt. Lbs. Per Sq. Ft.	Surface	Thickness	Mounting	Coefficients 125	250	500	1000	2000	4000	Noise Reduction Coef**
A54-280	12″ x 24″	1.16	Natural White	13/16″	7	.63	.71	.84	.77	.84	.94	.75
A54-281	12″ x 12″	1.16	Natural White	13/16″	1	.13	.31	.75	.95	.76	.77	.70
A56-296	12″ x 12″	1.22	Natural White	¾″	7	.57	.58	.60	.70	.66	.66	.70
A56-17	12″ x 12″	1.28	Natural White	¾″	1	.10	.34	.68	.87	.79	.83	.65

**The noise reduction coefficient is the average of the coefficients at frequencies from 250 to 2000 cycles inclusive, given to the nearest 5%. This average coefficient is recommended for use in comparing materials to be applied in offices, hospitals, banks, corridors, etc.

Schundler
EBBTONE®
Trademark registered U.S. Pat. Off.

ACOUSTICAL TILE

F. E. SCHUNDLER & CO., INC., JOLIET, ILLINOIS

Underwriters' Laboratories, Inc.
INSPECTED
ACOUSTICAL MATERIAL
Not over 50 Sq. Ft. Issue No. C-422

FIRE HAZARD CLASSIFICATION (Based on 500 for untreated red oak)
Attached to or Suspended from Noncombustible Surfaces With Noncombustible Attachments

FLAME SPREAD	5 - 10
FUEL CONTRIBUTED	10
SMOKE DEVELOPED	0

PRODUCT REPORTS

(Continued from page 268)

Prefabricated Hot-Cold Air Duct said to require no insulation or vapor seal is made of glass fibers bonded with a phenolic resin. Inside and outside are sprayed with plastic to form a vapor barrier on the outside and to prevent erosion on the inside. *Insul-Pipe* is supplied in 6-ft lengths, joined with short metal expansion couplings and weighs less than 2 lb per section. *Gustin-Bacon Mfg. Co., Kansas City, Mo.*

Vinyl Coatings for protecting masonry are said to eliminate extensive water seepage during storms. *Magic-Vulc #266* forms a waterproof seal for cinder blocks, concrete blocks, stucco and brick and even adheres to old paint. *Magic Chemical Co., 121 Crescent St., Brockton 2, Mass.*

Heating and Cooling Units for the home in the new G-E line include the gas furnace shown right, with the easy-to-clean finish in pastel gray colors typical of the line. Other models are an air conditioning unit with a remote air-cooled condenser component, a water-cooled air conditioner with greater capacity, and a smaller, more compact oil boiler. Also available is an outdoor thermostat which automatically adjusts indoor temperatures to the changing weather conditions outside. *General Electric Co., Home Heating & Cooling Dept., 5 Lawrence St., Bloomfield, N. J.*

To Aid Your PLANNING---

American Sterilizer Company

Foremost designer and builder of Surgical Sterilizers, Tables and Lights for modern hospitals

Has Prepared

1. **A 48-page Guide to Hospital Sterilizers and Technical Departments (A. I. A. File No. 35K)**
2. **An 8-page Guide to Surgical Lighting (A. I. A. File No. 31-F-28)**

for inclusion in SWEET'S ARCHITECTURAL FILE for 1956 Architects, engineers and hospital consultants will find these authoritative guides of sound professional value in preliminary planning for new or expanding hospitals.

We offer, in addition, a complete range of consulting and planning services through our 14 nation-wide branch offices and our Technical Sales Division in Erie. These services make available to you the most advanced treatments for such specialized units as Central Sterile Supply Departments and Solution, Milk Formula, Sub-sterilizing and Utility rooms. Further, they include the preparation of detailed plans, specifications and roughing-in drawings for these phases of your specific hospital project.

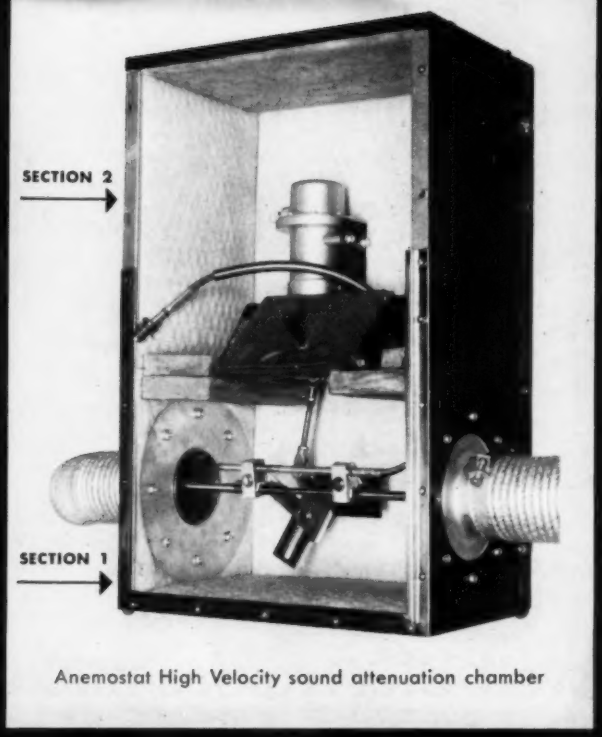
ATLANTA • BOSTON • CHICAGO • DALLAS
DETROIT • LOS ANGELES • NEW YORK CITY
PHILADELPHIA • PITTSBURGH • ST. LOUIS
ST. PAUL • SAN FRANCISCO • SEATTLE
WASHINGTON, D. C. • TORONTO, CANADA

AMERICAN STERILIZER
ERIE • PENNSYLVANIA

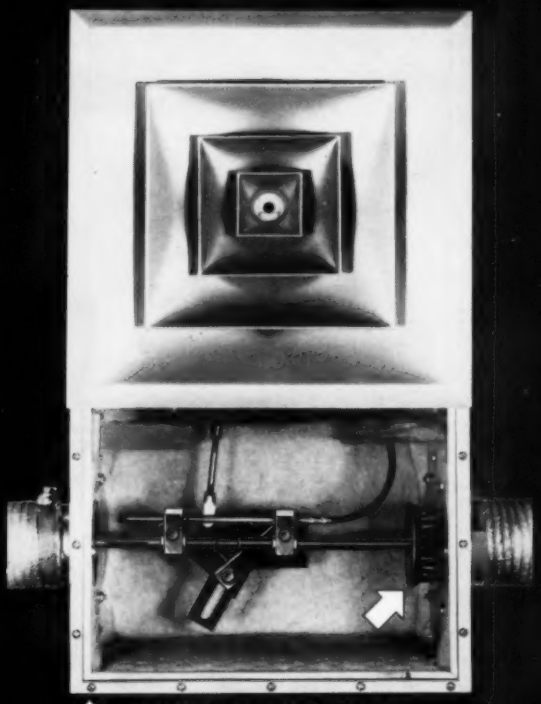
Reach-in Refrigerator features interchangeable interiors. The 40 cu ft capacity unit can take any combination of pan slides, meat rails, stationary or pull-out shelves and refrigerated drawers, all of which can be changed in minutes without tools. Called the *Vimco Model RS-40*, the refrigerator is 50¼ in. wide, 33½ in. deep, and 72¾ in. high. *Victory Metal Mfg. Corp., Plymouth Meeting, Pa.*

Fluorescent Lamps designed for use in low-temperature areas are 6 ft long and are available in one- or two-lamp units, open or closed. The peak efficiency for the enclosed two-lamp unit is at 0 F, making it useful in refrigerators, outdoors and similar installations. *Westinghouse Electric Corp., 401 Liberty Avenue, Box 2278, Pittsburgh, Pa.*

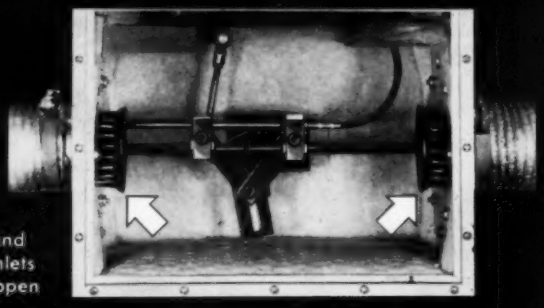
(Continued on page 276)



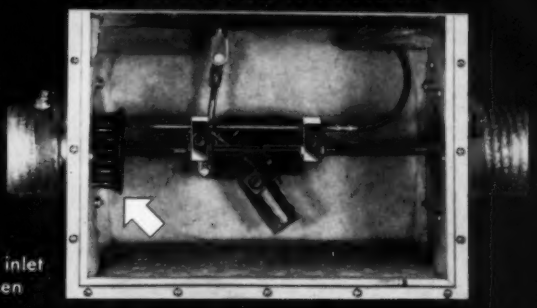
Anemostat High Velocity sound attenuation chamber



Hot inlet open in Section 1.
Anemostat in place covers Section 2



Hot and cold inlets 50% open



Cold inlet open

How to mix and diffuse high velocity air automatically

The Anemostat High Velocity sound attenuation chamber is divided into two sections. Both hot and cold air from the main risers enter Section 1, which is an acoustically lined blending chamber, in which the volumes of air are controlled by the Anemostat serrated rocket-socket valves. When the thermostat is set, the rocket-socket valves move slowly back and forth, thereby adjusting the volume of air supplied through the hot and cold inlets. The velocity of the air which enters Section 1, at from 3500 to 6000 fpm, is automatically reduced by expansion.

As the blended air meets the temperature requirements of the thermostat, it passes through a baffle arrangement into the acoustically lined Section 2 of the chamber, further reducing the db rating of the air.

The air then passes through the Anemostat Air Diffusers, where the aspiration effect causes mixing of room and supply air within the diffuser, resulting in further temperature equalization. The diffuser then delivers to the occupants of the room draft-free air at the desired temperature.

The Anemostat All-Air High Velocity distribution system offers other important advantages. It can be used with smaller than conventional ducts. It can be installed faster and at less cost. It requires no coils, thus eliminates leakage, clogging and odors. Furthermore, Anemostat round, square and straightline diffusers with high velocity units blend into a wide variety of architectural designs.

Write for 1956 New Products Bulletin and Selection Manual 50 to Anemostat Corporation of America, 10 E. 39 Street, New York 16, N. Y.

Anemostat: The Pioneer of All-Air High Velocity Systems

C-1337

Comfort story of a modern department store

How Honeywell Electronics makes

Shillito's Department Store, Cincinnati, O., a Federated Department Store.
Engineer: Leo S. Weil & Walter B. Moses, New Orleans, La., and St. Louis, Mo. Architect: Potter, Tyler, Martin & Roth, Cincinnati.

Typical shopping areas in Shillito's illustrate need for accurate control of large open spaces—maintained ideally by Honeywell Electronic Temperature Control. Other major advantages of the installation are:

. . . ***central control***—one operator at the Honeywell Supervisory DataCenter can read and adjust temperature at 36 locations throughout the store.

. . . ***savings on cooling***—outside air is used to help cut costs of refrigeration.

. . . ***savings on maintenance***—with central electronic control, fewer men are needed to maintain all mechanical equipment.

. . . ***quick response*** of electronic control system keeps indoor climate ideal regardless of changes in customer occupany.

central air conditioning pay off

Honeywell Supervisory DataCenter provides central control of modernized air conditioning system in seven-story building

A MODEL of centrally air conditioned comfort—that's Shillito's Department Store, southern Ohio's largest.

It's a model of air conditioning convenience and economy, too—thanks to Honeywell Electronic Temperature Control, chosen to govern the Cincinnati store's recently installed central heating and cooling system.

Air conditioning units scattered throughout the store had caused discomfort and maintenance headaches. Shillito's management wanted a new central system—and *central control* of the system. Honeywell Electronics provides it.

One man now can control the entire system from the Honeywell Supervisory DataCenter. At this single point he can adjust 38 thermostats and check temperatures at 76 different locations divided among the store's seven floors.

The result is better shopping climate for customers; better supervision of the air conditioning system that saves money for management—on fuel, power and maintenance.

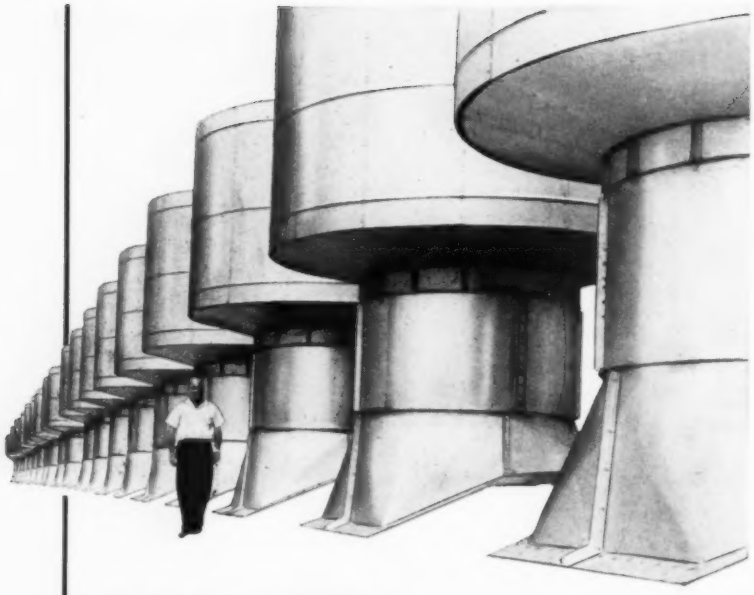
Honeywell Electronic Temperature Control offers many unique advantages in air conditioning management. It can serve your clients well in any building, new or existing, by providing new efficiency and economy in heating, ventilating, air conditioning and industrial control.

Call your Honeywell office for the new booklet that tells more fully how to apply electronics to your clients' problems—and for information on the economical Honeywell Periodic Maintenance Plan. Or write Honeywell, Dept. AR-5-102, Minneapolis 8, Minn.

MINNEAPOLIS **Honeywell**

Electronic Controls

112 offices across the nation



29 BURT FREE FLOW FAN VENTILATORS DO DOUBLE DUTY ON THIS STEEL PLANT

In this large steel plant, huge volumes of fumes and heated air must be exhausted during certain operations—lesser amounts during other production. Twenty-nine 72" Burt Free Flow Fan Ventilators with individual capacities of 81,000 CFM meet *both* needs efficiently. Burt Axial Flow cast aluminum fan wheels powered by 15 HP, 860 RPM Class B insulated motors, with shrouds and ventilating tubes, supply adequate air movement at peaks. At other times, their high wind band design provides extremely high air handling capacity as a gravity unit without the fan operating. If YOU need fresh air at low cost, let Burt engineers suggest—without obligation—the Burt Ventilators to do your task best.

Send for **FREE** *Data Book!*

Write for Burt Data Book SPV-101-E. It supplies quick data on Burt's complete line of modern Roof Ventilators.

FAN & GRAVITY VENTILATORS • LOUVERS • SHEET METAL SPECIALTIES

The Burt Manufacturing Company

48 E. South St. Akron 11, Ohio

MEMBER POWER FAN MANUFACTURERS ASSOCIATION

PRODUCT REPORTS

(Continued from page 272)

Acoustical Tile. *Kilnoise* is a white acoustical tile, incombustible, with a reflection rating of 88 per cent. Available with either straight or beveled edge, the tiles come in two sizes: 12 by 12 in. and 13 by 16 in. *New England Lime Company, Adams, Mass.*

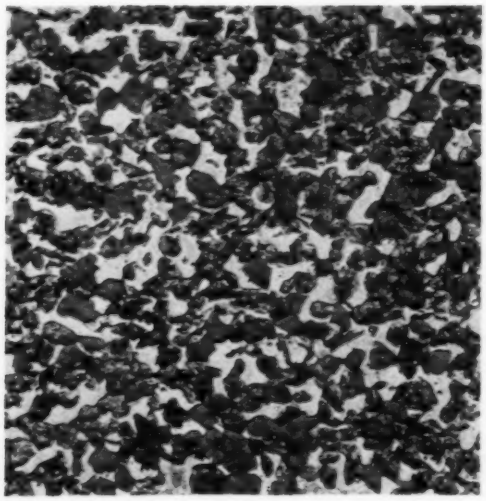
Colored Air Conditioning Units, packaged for commercial and residential use, come in pink, gray, blue, sandalwood, blue and "Firnmist." They are made in capacities from 3 to 20 tons. *Curtis Mfg. Co., Refrigeration Div., St. Louis, Mo.*

Flush Veneered Door. The *Golden Dowel* door, so called because of an identifying golden-colored dowel inserted in the edge of the door, is said to be the first staved wood, solid-core door to carry a lifetime guarantee. Each door has a serial plate on the hinge side, as indicated above, the number of which is recorded on the guarantee. The doors are said to be fire-resistant, sound-resistant and extremely durable. They can be installed either indoors or outdoors. *Roddis Plywood Corp., Marshfield, Wis.*

(Continued on page 280)

Aggregate Transfer

ADDS BEAUTY AND COLOR TO ARCHITECTURAL CONCRETE



Photograph (approximately ½ size) of an aggregate transfer area of the Cuming County Courthouse in West Point, Neb. Backlund & Jackson is the architect-engineer. Parsons Construction Co. is the contractor. Both firms are located in Omaha, Neb.

The Cuming County Courthouse in West Point, Neb. is an example of the warmth and color that can be imparted to architectural concrete structures by using the aggregate transfer method.

The red bands around the courthouse constitute the aggregate transfer area—a total of 1720 sq. ft. The color was achieved by a mixture of 65% dark cedar gray marble aggregate and 35% alpine red marble chips. The resulting blend contrasts pleasantly with the surrounding area of exposed, grout-cleaned concrete walls.

Aggregate transfer is an economical method developed to obtain color in architectural concrete walls. It is economical because the special aggregate needed is limited to a thin layer at the surface.

You attach colored aggregate to a thin form liner of plywood or other material by means of a special adhesive. Erect the reinforcing and back form in usual way and fill with concrete. Strip forms and treat the colored surface to expose the special facing aggregate.

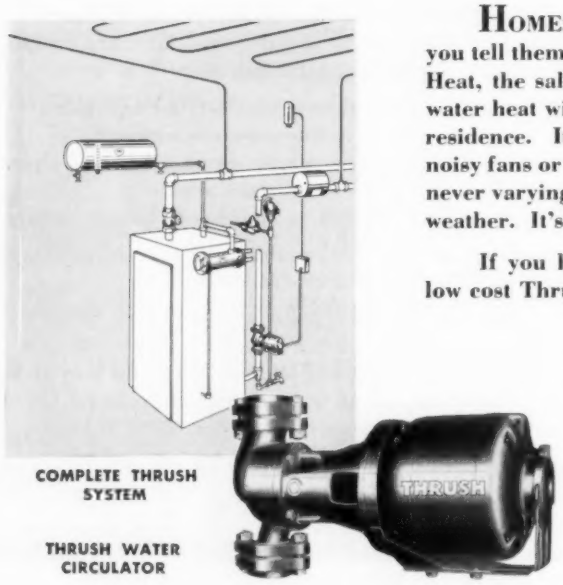
Architects are invited to write for free, illustrated literature, distributed only in the U.S. and Canada, on the aggregate transfer method.

PORTLAND CEMENT ASSOCIATION
Dept. 5-8, 33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

...and it's
heated with
THRUSH
radiant hot water

The Sales Clincher!



COMPLETE THRUSH SYSTEM

THRUSH WATER CIRCULATOR

HOMESEEKERS know the importance of good heating. When you tell them your homes are heated with Thrush Radiant Hot Water Heat, the sale is easier. New Thrush equipment places radiant hot water heat within the budget of the small home as well as the larger residence. It's quiet, clean, completely automatic. There are no noisy fans or drafts. The home is maintained at an even temperature, never varying more than a fraction of a degree, regardless of outside weather. It's very economical of fuel, too.

If you haven't been specifying hot water, investigate the new, low cost Thrush System now.

See our catalog in Sweet's or write
Department J-5 for more information.

H. A. THRUSH & COMPANY
PERU • INDIANA

Dozens of

Modern planning ideas in

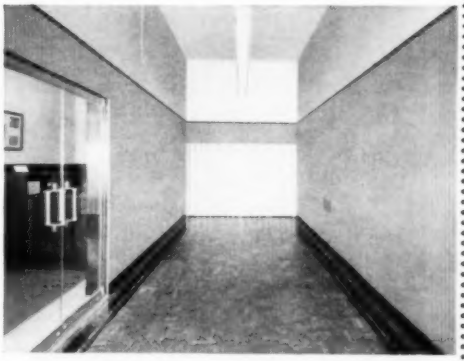
K&M ASBESTOS DECORATIVE PANELS!

For indoor or outdoor use

When clients want smart, dramatic effects in residential or commercial construction, these handsome decorative panels meet the need perfectly. They're ruggedly durable, light in weight, easy to saw and nail. Naturally gray in color, they take paint attractively.

Used outdoors, these new "Century" panels provide light-and-shadow textures which mask irregular weathering and staining. They are highly resistant to fire, vermin, rot and weather.

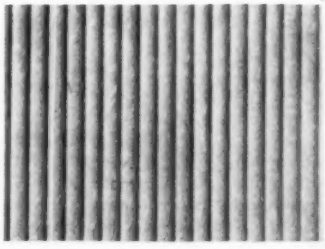
Used indoors, they offer exciting new possibilities as wall linings and trims. They're distinctive, attractive, yet resistant to scuffing and marring.



ARCHITECTS AND BUILDERS put new K&M Decorative Panels to work everywhere! Here, both fluted and lightweight corrugated asbestos sheets are used to restyle this office entrance. Imagine the demand for these new, versatile building materials that provide clean-lined beauty, superior fire protection with less maintenance.

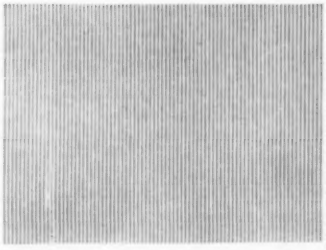
FLUTED ASBESTOS PANELS

Wide ribs provide a strongly-contrasting light-and-shadow pattern. Recommended for use by themselves or as contrasting panels with plain sheets. Especially effective when used for facades, soffits, mullions, dadoes, friezes. Narrow widths provide distinctive cover fillets, borders, architraves and marginal strips. Approximate size: 4′ x 8′ x ⅜″.



RIBBED ASBESTOS PANELS

Narrow ribs running the full length of the panel form a modern, closely-textured pattern. Highly effective as complete interior wall lining for small rooms. These panels are particularly recommended for use as dadoes, wainscoting, friezes, contrasting panels and marginal strips. Standard size: 4′ x 8′ with an approximate overall nominal thickness of ¼″.



For further information, mail the coupon today!

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

K&M best in asbestos

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA

☐ Send me literature and samples of your new fluted and ribbed K&M Decorative Panels

I also want information about:
☐ K&M Lightweight Corrugated Asbestos Sheets

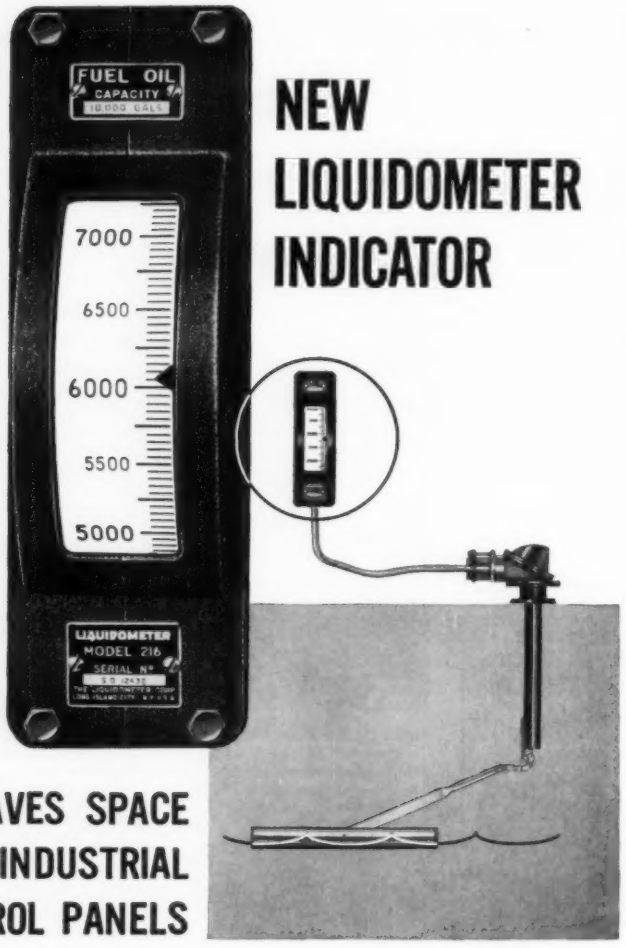
K&M Flat Sheets
☐ Apac ☐ Linabestos ☐ Sheetflextos

Name.....

Firm.....

Address.....

City.....Zone.....State.....



NEW LIQUIDOMETER INDICATOR

SAVES SPACE ON INDUSTRIAL CONTROL PANELS

Twenty-inch dial in 3 x 10¼" case permits close readings

The new Liquidometer Model 216 Indicator gives the plant engineer a reliable, automatic reading of storage tank contents. Available in either vertical or horizontal design, the compact and highly readable Model 216 Indicator makes possible multiple installations on crowded control panels.

Teamed with Liquidometer's time-tested hydraulic transmission gaging system, the new indicator provides instantaneous remote indication of liquid levels—automatically. No outside power source is required. Virtually any liquid may be measured, and the indicator can be located up to 250 feet from the tank.

Engineered for dependability, the Liquidometer gaging systems highlight these design features:

- Maintenance free
- Integral temperature compensation
- Ease of installation—requires only one 2" diameter tank opening
- Safety—all gages Underwriters approved for hazardous liquids

For further details on the new Model 216 Indicator, write Dept. A for Bulletin 532.

LIQUIDOMETER INSTRUMENTS

THE LIQUIDOMETER CORP.
SKILLMAN AVENUE AT 36th STREET
LONG ISLAND CITY 1, NEW YORK

PRODUCT REPORTS

(Continued from page 276)

Ceramic Radiant Heating Panels for use in rooms where wall space is at a premium, hang from the ceiling. The 1035-watt panel can be installed with either standard 12-in. mounting rods, special long rods, or chain. The unit is 24¾ by 23¼ by 2 in. Temperature is controlled by a separately mounted thermostat. *Heatmore, Inc., 59 Throop Avenue, Brooklyn 6, N. Y.*

Fluorescent Lamp with an internal reflector (top) gives 70 per cent more light than ordinary lamp (bottom), according to its maker. The lamp is intended for use where external reflectors are impractical, or for bare mounting in dusty areas. Special effects, such as indirect lighting, may be obtained by directing the beam of light upward or in other directions. *Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N. Y.*

Turbo designed for oil burner operation is said to be capable of delivering 2650 cfm. Design is adaptable for use in pneumatic conveyors, grain drying, aeriation, chemical processing, and the like. Unit can be supplied with wheels of aluminum, mild steel or stainless steel. *General Blower Co., Morton Grove, Ill.*

(Continued on page 284)

a new treatment for ASPHALT TILE

Now You Can Specify Maximum
"SLIP-RESISTANCE"
without sacrificing Beauty and Wear

Gymnasium at Platte Valley Elementary School, St. Joseph, R.F.D., Mo., doubles as lunchroom during the noon hour. (Architects: Eckel and Aldrich, St. Joseph, Mo.

Beautiful, fast-play gymnasium floor in Oakwood Junior High, Kalamazoo, Mich. (Architect: M. C. J. Billingham.)

Visit with us at our Suite at the Biltmore Hotel during the A. I. A. Spring Meeting, Los Angeles, Calif., May 15–18.

Super Hilco-Lustre®

for MAXIMUM "Slip-Resistance"

Climaxing years of research in Hillyard laboratories, this new "test tube" finish

Is formulated for asphalt tile, yet safe for all floors
Will not soften, fade, darken or discolor any resilient flooring material.

Gives complete surface protection
Forms a hard, smooth, unbroken surface that repels dirt and grease, keeping them from grinding in. Protects floor against food fats, that otherwise would create an unsightly, slippery condition. No water spotting.

Makes maintenance easy
The hard, smooth surface makes sweeping fast and simple. Although non-slip, it is *not* tacky, will not catch and build up dirt.

Provides extra economy
The finish *stays*. After repeated washings, the rich velvety lustre buffs back easily. Eliminates frequent stripping and refinishing.

The perfect solution for special problems of multi-purpose rooms . . . *one* product which fulfills your requirements for safety, appearance and economy on every floor you plan. Meets requirements for "slip-resistance" in basketball and recreational areas. Ideal for corridors and offices where appearance as well as extra measure of safety underfoot is necessary.

The Hillyard Maintaineer® nearest your job will follow through with "job Captain" service to insure proper application and finish beauty. The Hillyard Maintaineer is "On Your Staff, Not Your Payroll"

ST. JOSEPH, MISSOURI
Passaic, N. J.
San Jose, Calif.

Branches and Warehouse Stocks in Principal Cities

HILLYARD, St. Joseph, Mo. *In our 49th Year of Service*

Please give me complete details and specifications suggested for the Super Hilco-Lustre treatment of Resilient floors.

Name .....

Firm .....

Address .....

City ..... State .....

Create window beauty for the homes you plan

Andersen *Windowalls*

TRADEMARK OF ANDERSEN CORPORATION

Residence in Barrington, Ill., Ralph Stoetzel, architect.

You can create beauty in the homes you plan by framing a view like this with Andersen WINDOWALLS. No other window can do so much for a home; no other window can do justice to a charming scene. That's because Andersen WINDOWALLS are made of beautiful, insulating wood. Along with a breath-taking view, you offer superb window trim, smooth, easy operation, weatherproof protection from drafts, dust and moisture.

For full specification data on WINDOWALLS, see Sweet's Files or write Andersen for Detail Catalog and Tracing Detail Files. Sold exclusively by millwork dealers.

ANDERSEN CORPORATION • BAYPORT, MINNESOTA

it's a wall . . .
it's an entrance . . .
it's SUPERPLANNED!
Housing for B-47 jet bombers under construction at Homestead, Florida Air Force Base. Designed by The Kuljian Corporation, Architects and Engineers. All structural steel and hangar doors by International.

Each of this huge structure's two sides comprises 11 International-built doors — each door self-propelled, 64 feet high and 35 or 40 feet wide. Together, they form a weather-tight wall when closed, even when planes extend partially outside. All doors open with pushbutton ease, individually and in any combination, to match any entrance need at this giant maintenance hangar. Before planning door installations for any plant or aviation building, check with International . . . where you'll find the kind of teamwork that can help you make short work of entrance problems.

See Sweet's Industrial Construction File No. 7a

INTERNATIONAL SERVICE

INTERNATIONAL STEEL COMPANY

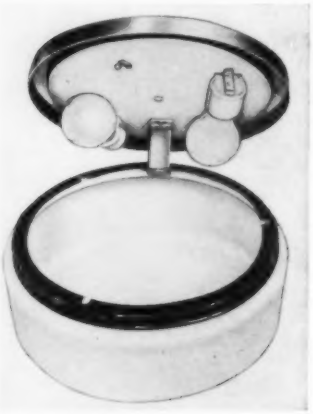
2100 EDGAR STREET • EVANSVILLE 7, INDIANA

PRODUCT REPORTS

(Continued from page 280)

Resilient Floor Tile features a multi-colored effect derived from the gem stone agate. *Agatine* has a super-dense surface which is said to eliminate dirt-catching surface pores. It is manufactured in a variety of colors in standard 9 x 9 tiles and comes in ⅛-in. thickness for heavy traffic areas and in 80-gauge for lighter traffic areas. *B. F. Goodrich Co., Flooring Div., Watertown, Mass.*

Electrically Controlled Office makes it possible for an executive to telephone, through a super-sensitive set, from anywhere in the office without using the hand receiver. Hi-Fi, TV, tape recorder, light dimmer, drape and door opener are all parts of the *Life Extender Office*, one of a series of "Trendsetting" offices displayed by *Macey-Fowler, Inc., 305 East 63rd St., New York, N. Y.*



Ceiling Pan Lighting Fixture has hinged globe for easy cleaning and bulb replacement. Globe locks into place on three lugs in fixture. A steel ring protects the globe lip from chipping or breaking. Offered in five sizes: 8-, 10-, 12-, 14- and 16-in. glass diameters. *Perfeclile Company, Cleveland, Ohio.*

(Continued on page 288)

427 miles of heating dependability

ASSURED FOR N.Y. STATE THRUWAY!

FIRST... By Sarcotherm Weather-Compensated Control Systems for all 40 Toll Interchanges

AND NOW... By Sarco Heating Specialties for 23 Service Areas

ON THE NEW YORK STATE THRUWAY, there are now 23 restaurant-gas service areas and 40 toll interchanges along the 427 miles of this great vehicular artery...from New York to Buffalo.

Each of these service areas and toll interchanges has its own heating plant. Therefore, dependability of equipment is of vital importance...for faulty operation or breakdowns would mean heating headaches and call-backs all along 427 miles of highway.

That is one of the principal reasons for the installation of Sarcotherm Weather-Compensated Control Systems for the hot water heating of *all* 40 toll interchanges...and of Sarco Steam Heating Specialties for *all* the 23 service areas now completed.

For undivided responsibility on your installations, specify and order from one "Complete Line" source...SARCO-SARCOTHERM...heating specialties, temperature regulators, condensate and vacuum pumps, finned tube radiation, and weather-compensated control systems for steam and hot water heating. Write for catalogs.

SERVICE AREAS—Architect: Eggers and Higgins. Consulting Engineers: Jaros, Baum & Bolles. Heating Contractors: Joseph Davis, Inc.; Mechanical Installations, Inc.; Harry Hoyle Contracting Co.

TOLL INTERCHANGES—Mechanical Engineers: Syska & Hennessy, Inc. Heating Contractor: Mechanical Installations, Inc.

SARCO

Sarco Company, Inc. • Sarcotherm Controls, Inc.
Empire State Bldg., N. Y. C.

2102-B

Long electrical feeders were needed to serve building's rambling wings and 10-story tower, thus making higher-voltage system ideal.

Higher-voltage General Electric distribution

G-E ENGINEERING assisted from planning to start-up. Here G-E engineer, G. E. Troyak (standing), confers with J. F. Hegberg, assistant manager—building service; N. K. Knafla, chief electrical engineer of Magney Tusler & Setter, architects and engineers; and A. S. Ingebredtsen of Electric Repair & Construction Co., electrical contractors.

Planners use 480Y/277-volt savings to provide liberal capacity for future loads

Featuring high-level lighting, year-round air conditioning, banks of business machines, escalators, and elevators, the new North Central Home Office Building of the Prudential Insurance Co. has an average of almost 10 volt-amps of electrical load for each square foot of the 292,000 square feet of floor space. In spite of this dense load, Prudential was able to save money on the vital power distribution system serving its Minneapolis building.

SAVING WAS MADE POSSIBLE by using a 480Y/277-volt distribution system to serve most of load. It would have cost about $50,000 more for a comparable system with 120/208Y volts. The present system has liberal capacity already designed-in to accommodate future increases in electrical demand. Also, to assure reliability, it has two primary power sources, with equipment to switch automatically from one to the other in emergencies.

Key to economies of this sytem is that the higher the secondary voltage, the lower the current for a given kva load. Lower current-carrying requirements mean conductors, such as cable and bus, can be smaller or fewer in

SYSTEM PROTECTION at dual 13.8-kv service entrance is provided by highly reliable G-E metal-clad switchgear, which automatically switches to second line if power fails.

EXTRA RELIABILITY is assured by double-ended substation supplying 480Y/277 volts. Either transformer can maintain building services.

NECESSARY 120-V POWER for incandescent lights, business machines is provided by G-E unit substation. Drawout circuit breakers facilitate cleaning and inspection of units.

WELL-LIGHTED offices utilize G-E 265-v ballasts with standard G-E fluorescent lamps to maintain design illumination of 40 foot-candles.

system saves Prudential estimated $50,000

number, and circuit breakers can handle higher loads. Other savings come from 440-v motors and control, and reduced voltage drop.

THREE CRITERIA governing applicability of 480-volt system to specific buildings are: (1) load make-up—at least one-third of load must use 480 or 277 volts; (2) load magnitude—total load must be at least 200 kva with primary service, 1000 kva when served from secondary network; (3) length of risers and feeders —if these average 200 feet system will be economical regardless of (1) above.

This system can pay off for you too—and so can General Electric engineering assistance available to you with G-E equipment. Contact your nearest G-E Apparatus Sales Office for full details or mail coupon at right. General Electric Co., Schenectady 5, N. Y.

JUST RELEASED: A More Power to America program on power distribution for commercial buildings. Featuring an informative, entertaining full-color film, "The Tenant at 1010 Main," the program portrays the benefits of an adequate system and 480-volt distribution. Ask your G-E Representative about it or mail coupon.

Engineered Electrical Systems for Commercial Buildings

GENERAL ELECTRIC

FOR MORE INFORMATION MAIL COUPON TODAY

GENERAL ELECTRIC CO.
SECTION 680-3A
SCHENECTADY 5, N. Y.

Please send me:

☐ "Modern 480Y/277-volt Power Distribution Planning Guide" (GEA-6344)

☐ "Modern Distribution Equipment for Commercial Buildings in Secondary Network Areas" (GEA-6223)

I am also interested in ☐ borrowing, ☐ purchasing "The Tenant at 1010 Main," 33-minute, color, motion picture.

NAME.....

POSITION..... COMPANY.....

ADDRESS.....

CITY..... STATE.....

Architect: Ludwig Mies van der Rohe
Assoc. Architects: Friedman, Alschuler & Sincere
Mech. Engineer: William Goodman
Struc. Engineer: Sumner Sollitt Co.
Mech. Contractor: Advance Heating & Air Conditioning Corp.

Marlo Seazonaires to Air Condition Luxurious New Chicago Apartments

$25,000,000 LAKE FRONT GROUP WILL BE ONE OF COUNTRY'S LARGEST FULLY AIR CONDITIONED PROJECTS

These fabulous skyscraper dwellings, being built by Herbert S. Greenwald, will include the "900 Esplanade Apartments," two 29-story structures, and four 28-story "Commonwealth Promenade Apartments." They will be the tallest flat-slab, reinforced concrete buildings in the country, and possibly in the world.

Year-round comfort conditioning in these luxurious apartments will be provided by Marlo Seazonaire Room Air Conditioning Units—Remote Type—permitting individual selection of temperatures in each suite.

WRITE TODAY for New Brochure on Marlo Seazonaire Room Air Conditioning Units—Remote Type

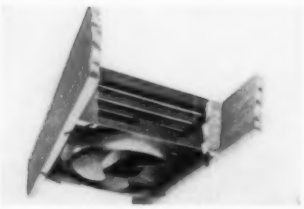
MARLO coil co.

SAINT LOUIS 10, MISSOURI

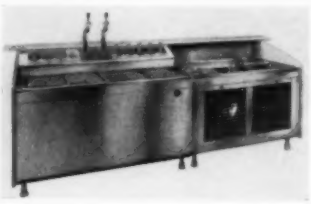
Quality Air Conditioning and Heat Transfer Equipment Since 1925

PRODUCT REPORTS

(Continued from page 284)



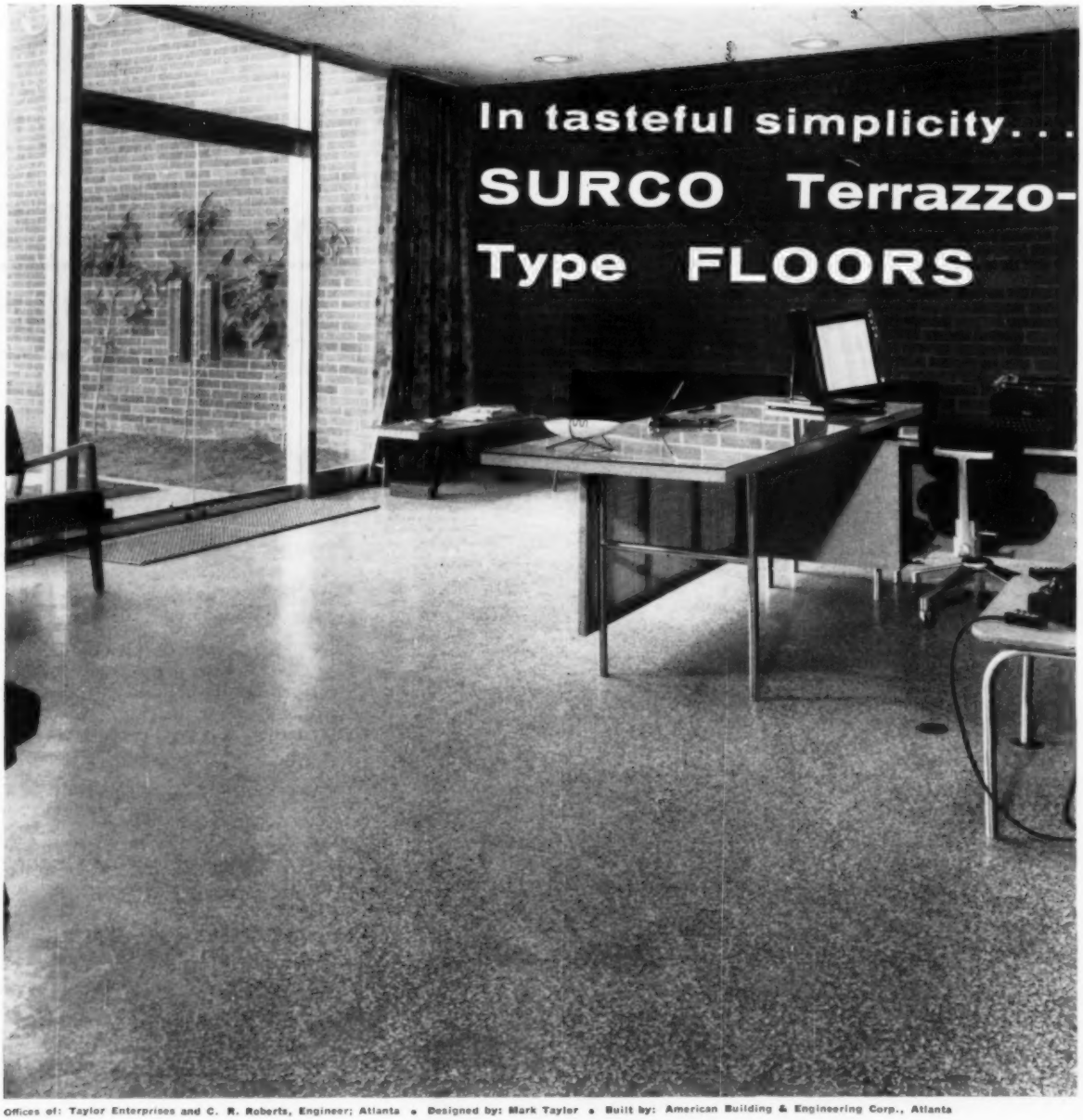
Attic Ventilator. *Pancake Package Ventilator*, 8 in. deep and 30 in. square, is made for installation in homes with minimum attic space and can be installed entirely from below. A 24-in. propeller driven by a 1/6-hp motor replaces 4000 cu ft of air per minute. Operation is said to be vibrationless, since the unit is suspended by four steel coils. *Diehl Manufacturing Co., Somerville, N. J.*



Soda Fountain Unit complete within itself and requiring only 10 ft of floor space is now available for stores with rigid space limitations. Made of heavy gauge stainless steel with a *Formica* counter, the *Booster* needs only a water supply connection and an electrical plug-in. *Spartan Fountains, Inc., 250 West 57th St., New York, N. Y.*

Automatic Car Parker issues time coded tickets to cars arriving at parking areas while a single attendent concentrates on making collections from departing cars. The unit, which "spits" a ticket to each driver as his car passes over a treadle, operates on two 110-volt AC circuits and can be installed on the surface with concrete lag screws. *Automatic Parking Devices, Inc., 1009 Cass Avenue, Detroit, 26, Mich.*

(Continued on page 292)



Offices of: Taylor Enterprises and C. R. Roberts, Engineer; Atlanta • Designed by: Mark Taylor • Built by: American Building & Engineering Corp., Atlanta

SURCO TERRAZZO type flooring is here tastefully blended with modern furniture to provide a cheerful and congenial atmosphere to this office lobby.

Although most of our floors are waxed this one has remained unwaxed since its installation nine months ago, yet it still retains a glossy finish.

SURCO TERRAZZO was applied ¼"-⅜" thick after the concrete slab was completely cured. In this particular installation no expansion joints were used. Drilling through the floors for telephone or electrical wiring presents no problem since SURCO TERRAZZO will not crack or craze from ordinary drilling operations.

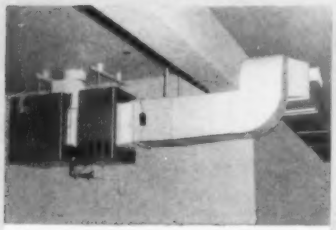
For beautiful economical floors with resilience comparable to quality hardwood floors, use SURCO terrazzo-type material.

SURFACE COATINGS, INC.
110 Pear Street, S.E. • Atlanta, Georgia

See Sweets Architectural File for further information on SURCO products for home and industry.

SURCO

CHERRYWOOD SHOPPING CENTER, WANTAGH, L. I., with 25 stores. One of many in the Long Island area designed and built by Berger & Tilles, who have standardized on Janitrol Unit Heaters. Heating Eng. M. Prop; Heating Contractor, Metropolitan Sheet Metal Co., Elmhurst, L.I.



This blower-type Janitrol unit feeding a duct system is typical of the modern heating provided stores at Cherrywood Shopping Center.

Warm air registers (circled in photo) provide efficient heat distribution in the 25 stores at Cherrywood Shopping Center.

CLEVELAND'S FAMOUS VAN AKEN CENTER, built and owned by Zehman-Wolf Construction Company. Weinberg and Teare, Architects. Says Mr. Milton A. Wolf, Partner—"With over 80% of our 27 stores year 'round conditioned, savings in air conditioning equipment were important. To cut costs, but not performance, we specified Janitrol Duct Furnaces in combination with summer cooling units. We are completely satisfied with our Janitrols. We've had no maintenance problems."

Suspended Duct Heater combined with a summer conditioner at Van Aken Center. Bypass duct cuts off air through furnace during cooling season.

WHAT'S BEHIND JANITROL MULTIPLE FOR SHOPPING

Only a Janitrol Multiple Unit System Provides all these Basic Advantages

SAVE UP TO 50% ON INITIAL COST... Compact, factory-assembled Janitrol heaters install easily—save up to 50% on original equipment and installation cost when used in place of a central system.

UNUSUAL ECONOMY OF OPERATION... Actual cost records from major shopping centers show extraordinary savings in fuel and freedom from maintenance expense.

SAVE INCOME-PRODUCING SPACE... Janitrol units are ceiling mounted, save valuable floor space for sales or service needs.

EXTRA-LONG SERVICE LIFE... Janitrol heaters feature the famous Multi-Thermex Heat Exchanger with the finest performance record in

ARCHITECTS AND ENGINEERS' INFORMATION SERVICE...

Write today for complete A.I.A. files on heating with gas in big buildings of every type, and for Janitrol planning and specifications service. There's no obligation.

MAKERS OF *Surface* INDUSTRIAL FURNACES, *Kathabar* HUMIDITY CONDITIONING, *Janitrol* COMMERCIAL, INDUSTRIAL AND RESIDENTIAL HEATING AND COOLING EQUIPMENT.

THE TREND TO HEATING UNITS CENTERS?

the industry—less than ¼ of 1% heat exchanger tube failures in over a million tubes since 1940!

SUMMER COOLING EASILY ADDED... Cooling coils are easily added in the same ductwork used for heating. A bypass arrangement cuts off air flow through heater during cooling season.

INDIVIDUAL STORE CONTROL... Tenants control heating to suit individual needs. The building owner is relieved of responsibility for operating costs, maintenance, service.

VERSATILE "DUAL FUEL" PERFORMANCE... Janitrol heaters use any type gas, including LP; may be switched from one type to another automatically.

Janitrol field representatives are trained in heating layouts and proper installation methods to assure all the benefits and economies of gas—the clean modern fuel, in an efficient multiple-unit system. They will gladly consult with you on your heating problems.

Janitrol
GAS-FIRED UNIT HEATERS

Janitrol Heating & Air Conditioning Division
Surface Combustion Corporation
Columbus 16, Ohio

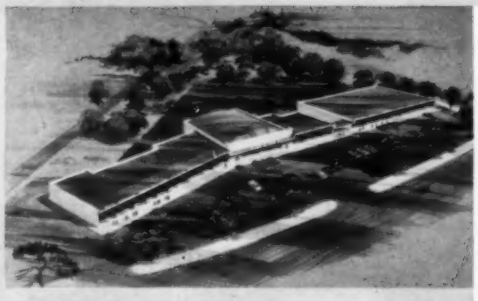
In Canada: Moffat Heating and Air Conditioning Division,
Moffats, Ltd., Toronto 15.

68 JANITROL UNIT HEATERS AT EASTGATE SHOPPING CENTER, AKRON, provide clean, economical gas heating with minimum maintenance expense, use absolutely no floor space! The versatility of Janitrol gas-fired heaters makes them easily adaptable for a wide variety of installations. Choice of input capacities from 50,000 to 1,750,000 Btu/hr.

At Eastgate's 13 stores, Janitrol unit heaters
- ... direct heat where most needed
- ... operate only when needed
- ... save valuable floor space

AT LEVITTOWN'S GATEWAY SHOPPING CENTER, all tenants control their own heating to suit operating hours and individual needs, and the building owner is relieved of responsibility and expense for operation. This convenience for tenants and freedom from furnace financing for the owner is made possible by compact, efficient Janitrol gas-fired unit heaters in place of a central system.

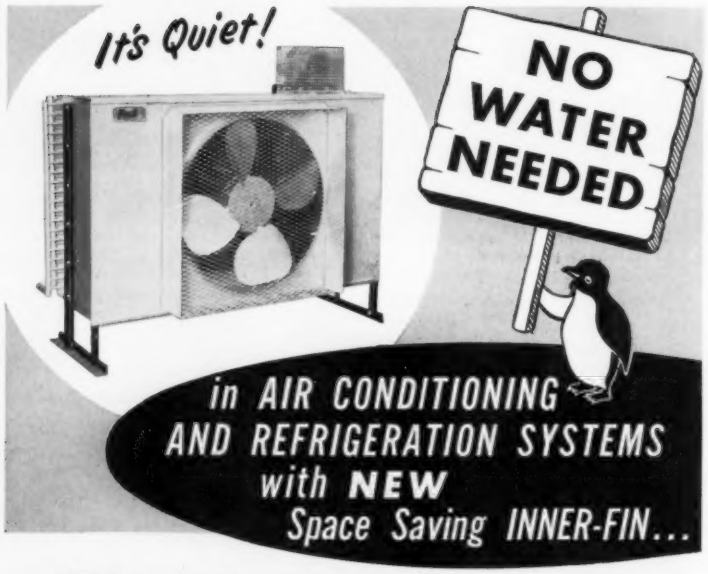
Typical installations of Janitrol gas-fired unit heaters in stores at Levittown's Gateway Shopping Center. Heating-Plumbing Contractors, Latisch and Launer, Brooklyn, N.Y.



NEW DOUGLASTON SHOPPING CENTER, QUEENS, N.Y.

(Architect's sketch.) One of 17 Centers developed by Architect Herbert Tannenbaum, New York City, who says—"I feel it is my responsibility to specify more than just a heating system. I demand proved performance, so I have standardized on Janitrol gas-fired heating. I know, from over a decade of experience, of Janitrol's good record for low maintenance and service costs.

Janitrol Duct Heater installation in Safeway Store at Douglaston Shopping Center.



BUSH 'BC' Blower-Condensers

Bush 'BC' Blower Condensers permit air conditioning or refrigeration systems to operate *without* condensing water . . . provide the answer to excessive water costs, limited supply, excessive impurities or disposal problems.

Available in capacities up to 20 Tons, new Bush 'BC' Blower Condensers feature *low noise level* . . . quiet operation.

Patented Inner-Fin coil construction, *a Bush exclusive,* makes these the most compact units on the market. Units are easy to install, have rugged all-steel cases with durable rust-resistant finish . . . are available arranged with either blower fan or propeller fan.

The BUSH line of water-savers, most complete in the industry, also includes:

'CDT' COPPER DECK COOLING TOWERS with all copper decking which cannot rust or rot. Capacities from 3 to 75 tons.

'IEC' INNER-FIN EVAPORATIVE CONDENSERS featuring patented inner-fin coils. Both units available with blower or propeller fan. Capacities from 3 to 90 tons.

'PFC' PROPELLER FAN CONDENSERS — Two basic models, 2.2 Tons and 3.3 Tons, can be combined by mounting in banks to obtain any desired tonnage.

'PS' PRESSURE STABILIZERS which automatically maintain satisfactory head pressure when air cooled condensers operate outside in low ambient temperatures.

Write direct for complete information or contact your experienced BUSH representative for valuable engineering and application assistance.

BUSH

BUSH MANUFACTURING COMPANY
WEST HARTFORD 10, CONNECTICUT

RIVERSIDE · CALIFORNIA

PRODUCT REPORTS

(Continued from page 288)

Extra Long Aluminum Windows with sliding glass inserts are especially designed for apartment buildings, schools, offices and other commercial buildings. Made in heights up to 5½ ft and widths as desired, the windows feature removable inserts for ease of cleaning. *Luria Building Products, Inc., Bristol, Pa.*

Hydraulic Shock Absorber intended to halt water hammer in all types of hydraulic systems has bellows and case (see above) made of stainless steel for long life. The *Shocktrol* shock absorbers are being made in six sizes to fit pipes ½ to 2 in. in diameter. *J. A. Zurn Mfg. Co., Erie, Pa.*

Glass Refrigerator Door permits easy viewing of contents of new commercial refrigerator. Choice of cooling coils makes unit adaptable for making ice cubes or for no-ice operation. A vaporizer jar in the rear makes unnecessary any drain connection. The unit defrosts automatically and comes in 18, 22 and 28 cu ft sizes. *Nor-Lake Inc., Hudson, Wisconsin.*

(Continued on page 296)

THE MARK OF QUALITY

BARBER COLMAN

uni-flo

Engineered Air Distribution

Performance *Guaranteed* with Venturi-Flo ceiling diffusers

1 Opposed-blade volume control operated through face of diffuser

2 Allen head adjusting screw raises and lowers inner assembly to produce deflections ranging from horizontal to vertical

Barber-Colman *guarantees* performance of Venturi-Flo Ceiling Diffusers when they are used according to published data. With Venturi-Flo you get a high rate of aspiration for efficient diffusion, quiet operation. Deflection and opposed-blade volume controls are quickly and easily adjustable after installation. Rigid construction prevents damage during shipping and installation. Select from a wide range of sizes and styles, both recessed and surface types. Contact your nearby Barber-Colman Field Office, or write . . .

Barber-Colman Company

DEPT. E, 1104 ROCK STREET, ROCKFORD, ILLINOIS, U. S. A.

*FIRST COST *can be the* LEAST COST *if it's the* LAST COST

"INFO" for Architects and Builders

1 "AL Stainless Steels for Building"—12 pages on stainless grades, properties, forms, finishes, standard "specs," uses and advantages.

2 "Stainless Steels for Store Fronts and Building Entrances"—40 pages of valuable data on examples and details. AIA File No. 26D.

3 "Stainless Steel Curtain Walls"—A 24-page progress report on methods. AIA File No. 15-H-1.

Write for Details

Address Dept. R-77

Take the lobbies of big buildings as an example, so many of them all agleam with stainless steel on walls, columns, elevator enclosures, etc.

They weren't built that way just to *spend* money. Stainless was used to SAVE money, because of all modern surfacing materials, nothing else is at one and the same time as hard, strong and lastingly beautiful—as resistant to heat, wear and corrosion—as easy to clean and keep clean as stainless steel. *Nothing else lasts as long and costs as little in the long run!*

Lobby interiors are only a case in point. The same advantage of long-term economy holds good for stainless steel curtain wall panels on building exteriors. Or stainless store fronts, marquees and entrances. Or stainless windows and doors, railings, grilles, roofs, drainage systems, etc.

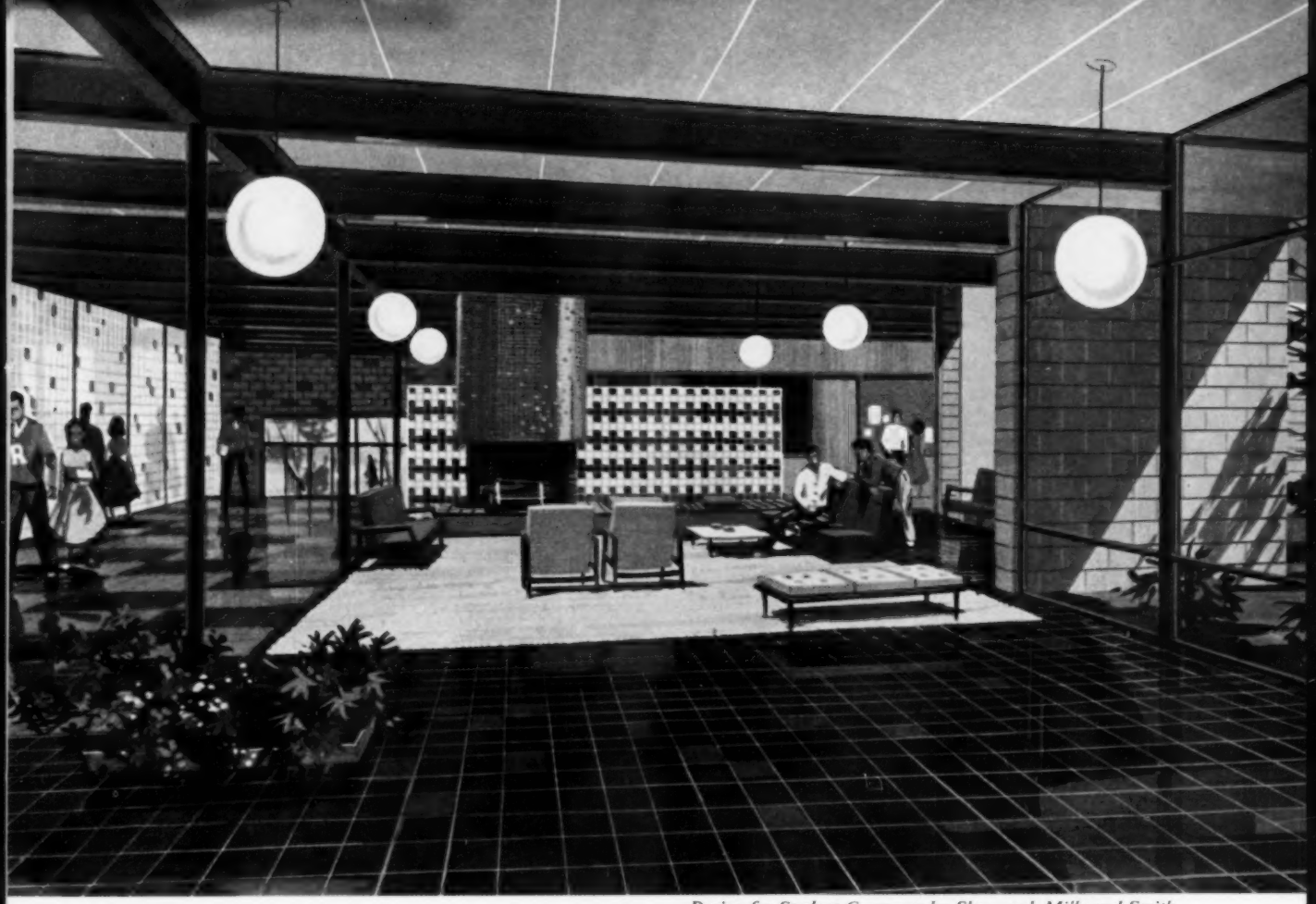
• Wherever a surface or a product has to take a beating and *last*, AL Stainless can save you money. Let us give you any information or technical assistance you may need. ***Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa.***

Make it BETTER-and LONGER LASTING-with

AL Stainless Steel

AL® ALLEGHENY LUDLUM

W&D 5732A **Warehouse stocks carried by all Ryerson Steel plants**



Design for Student Commons by Sherwood, Mills and Smith

"CERAMIC TILE COMBINES COLORFUL SURFACING WITH LOW MAINTENANCE COSTS."

SHERWOOD, MILLS AND SMITH
per T.S.

Sherwood, Mills and Smith have created a design for a high school Student Commons room. Ceramic tile is the key surfacing material—one which gave the architects both durability and design flexibility.

The handsome, heavy-duty ceramic tile floor units will take generations of student traffic with little wear and no waxing. The glazed tile walls will never see a paintbrush—yet they'll remain sparkling, fireproof, scratchproof and stainproof for the life of the school.

The colorful tiled fireplace wall provides a friendly focal point for student discussions—a lasting tribute to tile's ability to give architect and builder unique custom effects with standard tiles.

A ceramic tile specification is in tune with today's school and institutional needs. You actually specify "built-in" maintenance savings: easy cleaning, no waxing and no replacement for the life of the installation. See your tile contractor. Ask him for the latest information on ceramic tile colors, textures and sizes. It will pay off on your next project for both you and your client.

The Modern Style is CERAMIC tile

TILE COUNCIL OF AMERICA, Inc., Room 3401, 10 East 40th St., N.Y. 16, N.Y. or Room 933, 727 W. 7th St., Los Angeles, Calif.

PARTICIPATING COMPANIES: American Encaustic Tiling Co. • Architectural Tiling Co., Inc. • Atlantic Tile Mfg. Co. Cambridge Tile Mfg. Co. • Carlyle Tile Co. • Dover Ceramic Co. • General Tile Co. • Gladding, McBean & Co. • Jordan Tile Mfg. Co. Mosaic Tile Co. • Murray Tile Co., Inc. • National Tile & Mfg. Co. • Olean Tile Co. • Pomona Tile Mfg. Co. • Ridgeway Tile Co. Robertson Mfg. Co. • Royal Tile Manufacturing Co. • Sparta Ceramic Co. • Stylon Corp. • Stylon Southern Corp. • Summitville Tiles, Inc. United States Ceramic Tile Co. • Winburn Tile Mfg. Co.

PRODUCT REPORTS

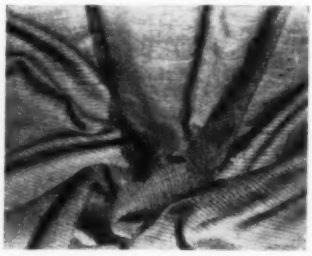
(Continued from page 292)

Food Service Consulting Service to architects for the planning and setting up of fountain and food service installations in large chains, department stores, restaurants and public eating places is offered by *Foremost Fountains, Inc., 250 West 57th St., New York, N. Y.*

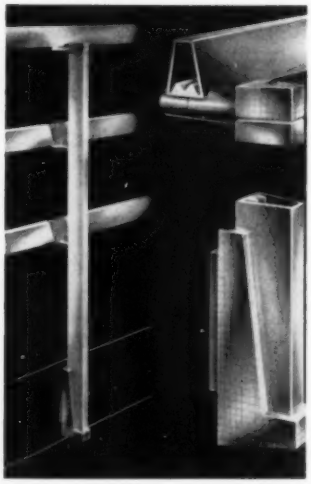
Blower Condensers with capacities up to 20 tons are available for air conditioning and refrigeration systems with either blower or propeller fans. The "BC" blower condensers have an *Inner-Fin* coil system that makes them, according to the manufacturer, the most efficient units on the market. *Bush Manufacturing Company, West Hartford, Conn.*

Fiberglas Acoustical Ceiling Boards in eight modular sizes are manufactured in three types: grooved, Mylar faced and with a white textured facing. The boards are said to be firesafe, rot-proof and odor-proof. They can be installed by resting them on exposed "T" systems

so that ceiling fixtures are still accessible. They are said to absorb 75 to 90 per cent of all encountered noise. *Owens-Corning Fiberglas Corp., Toledo, Ohio.*



Translucent Drapery Cloth lets light in and permits those inside to see out while maintaining full privacy. The material is rated fireproof, is resistant to fume fade, and can be washed, it is claimed, with any soap or detergent without stretching, shrinking or fading. *Translucent Cloth* is 50 in. wide and comes in six colors from *Edwin Raphael Co., Holland, Mich.*



Aluminum Railings intended to replace pipe railings where cost is a major factor in the installation are said to be low in cost because the railing and the post are the same shape. *Tube-Line* railings are assembled with patented fittings. Units are supplied by *Blumcraft, 460 Melwood Street, Pittsburgh, Pa.*

(Continued on page 300)

Pre-built units matching standard Huntington patterns are effectively used at Morris Harvey College, Charleston, W. Va., by architect Charles A. Haviland, A.I.A.

You're sure of top quality when you specify

HUNTINGTON *Pre-Built Units*

"Made better to look better and last longer"

Complete specifications and detail drawings are available, based on recommendations by leading architects, and covering every aspect of materials and assembly.

Ready for installation on delivery, these pre-built units require no further carpentry or finishing. On-the-site millwork cannot duplicate Huntington's high-quality cabinet work, eye-appealing appearance, solid construction in durable hardwoods, easy and inexpensive maintenance.

Harmonious unified effects are achieved by matching styles and finishes of standard and custom-made pre-built units with Huntington's over 179 versatile seating, sleeping, and case goods patterns.

Economical prices reflect the savings created by high-volume production, with rigid quality controls maintaining Huntington standards of excellence. All costs can be included in construction charges under FHA mortgage requirements.

HUNTINGTON FURNITURE

HUNTINGTON CHAIR CORPORATION
Huntington, West Virginia
Showrooms: Huntington
New York • Chicago • Miami

For specifications and detail drawings, along with information on how Huntington pre-built units will meet your needs at low initial cost and low upkeep cost, simply cut out this coupon and send it with your organization letterhead today—without any charge or obligation.

"Huntington's good taste and high quality are always impressive, never expensive."

B-2

American General Investment Corp. Main and Richmond Sts., Houston, Texas. *Architect:* Wyatt C. Hedrick, Inc.

WHY DID THIS HOUSTON FIRM SELECT G-E PACKAGED AIR CONDITIONERS?

Six G-E units cool 20,000 sq. ft. . . . satisfy the individual cooling needs of five zones

Progressive firms like American General Investment Corporation are turning, more and more, to the modern, low-cost way to air condition a building. G-E Packaged Units have all the efficiency of central systems *plus* greater flexibility in meeting varied air conditioning requirements.

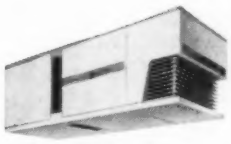
In American General Investment's new Houston office, the large office areas, the numerous small offices and the business machine room are divided into five zones. Six G-E units—one 5-ton, one 15-ton and four 10-ton, all located out-of-space—permit individual temperature and humidity control of each zone.

Thus, both the business machine room, which has a high internal heat load, and the normally less warm offices, are independently air conditioned—eliminating the problem of overcooling one zone in order to keep another zone comfortable.

Furthermore, since a G-E Packaged System is a *unit* system, just those zones are cooled in which people are working. Any unit may be taken out of operation at any time. And if a unit requires servicing, such as a periodic change of filter, it may be shut down without affecting the operation of other units. Write for data to: General Electric Co., Commercial and Industrial Air Conditioning Dept., Bloomfield, N. J.

MORE ADVANTAGES WITH G-E PACKAGED AIR CONDITIONERS:

- Low installation, low operating costs.
- Provide maximum design freedom in new construction and modernization. Floor models can be used in space or concealed. Ceiling-mounted models take no floor space—may be shelf-mounted.
- Streamlined cabinet styling.
- All models may be used singly or in multiple to meet any air conditioning need.
- Muggy Weather Control removes excess moisture in any weather without overchilling or clammy cooling.
- Built and assembled by G.E. Five-year warranty covers entire sealed cooling system.



Self-contained ceiling models—3 and 5 ton air-cooled—3, 5 and 7½ ton water-cooled.

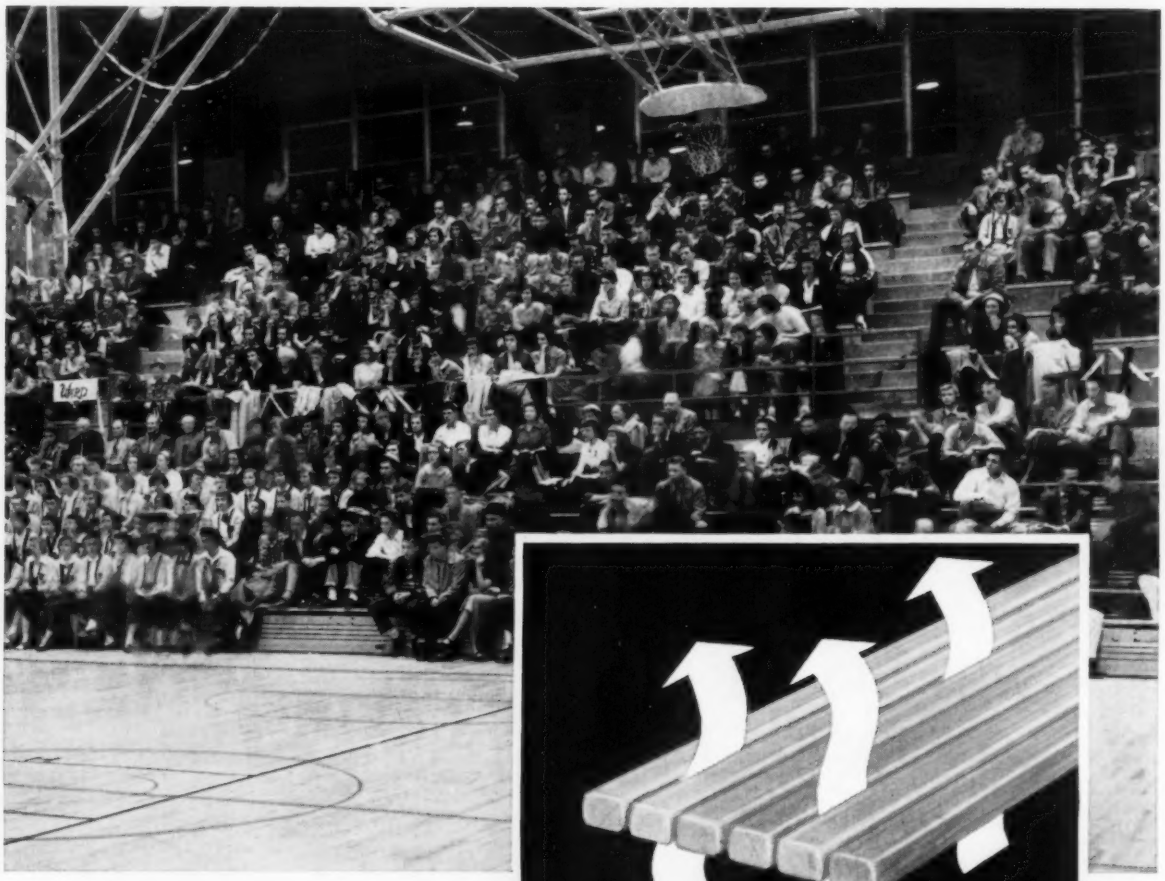
Self-contained floor models—3, 5, 7½, 10 and 15 ton water-cooled.

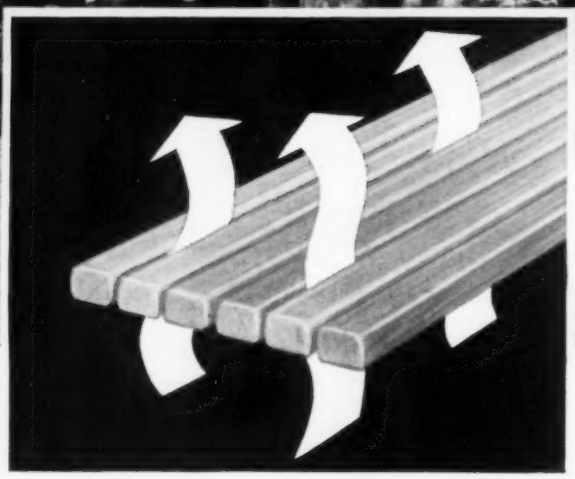
packaged AIR CONDITIONERS

Progress Is Our Most Important Product

GENERAL ELECTRIC

Exclusive with Brunswick-Horn Folding Gym Seating





Rail type boards

eliminate costly ventilating problems

No manufacturer but Brunswick-Horn offers you rail type seat, foot and skirt boards that provide free circulation of air. Wall-located vents continue to operate efficiently and there is no need to go to the expense of extending ductwork to the front of the seating unit.

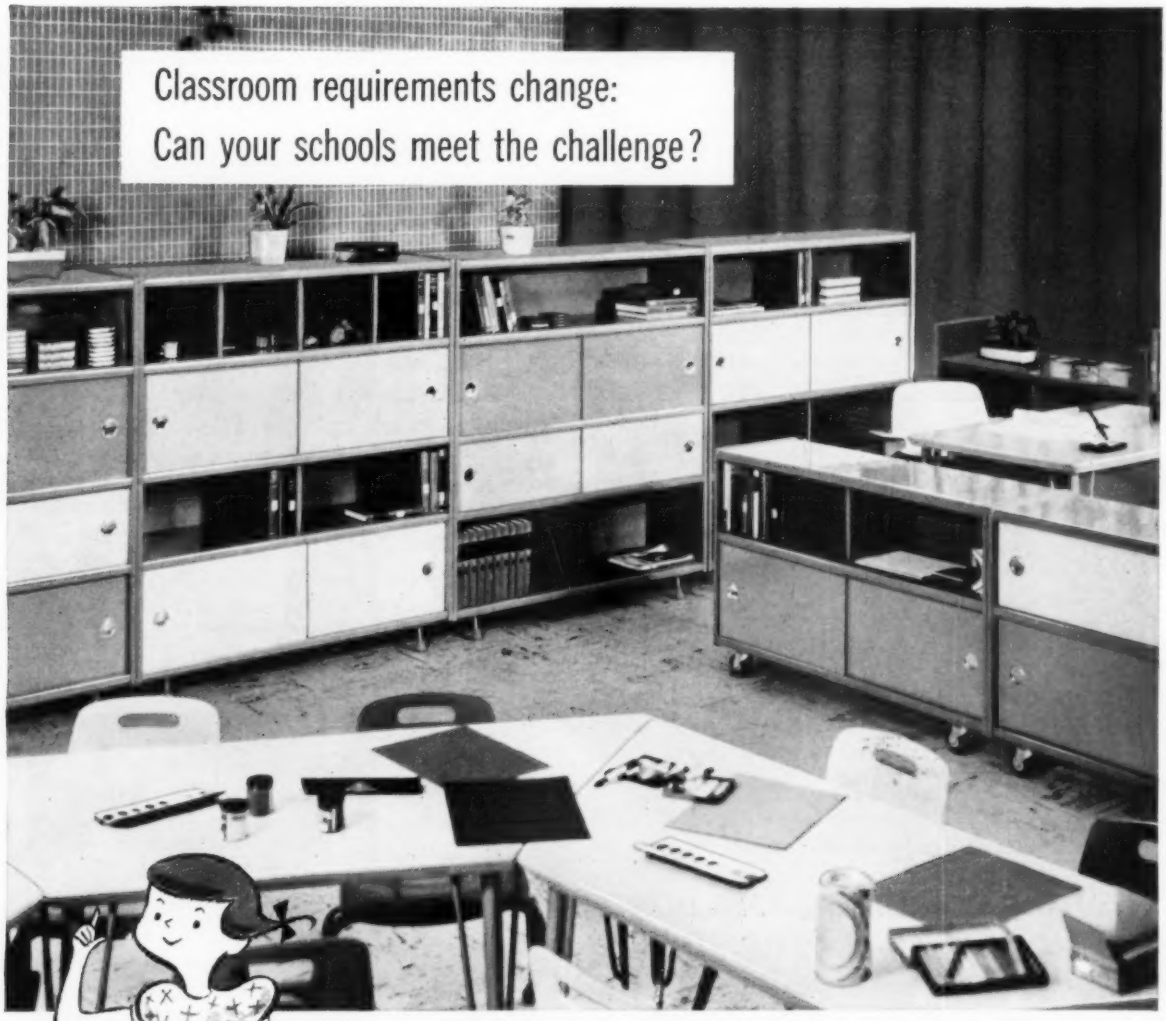
One-quarter inch air spaces between the rails provides maximum circulation with the unit open or closed. Greater resiliency means increased comfort, too, and the lighter weight means easier handling and maintenance.

Here is another *exclusive* feature of Brunswick-Horn Folding Gym Seating. For more details on rail type boards, plus the other features that make this the best buy for *your* gymnasium, call your Brunswick-Horn representative today.

See SWEET'S 22 J / Ho

THE BRUNSWICK-BALKE-COLLENDER COMPANY
Horn Division · Marion, Virginia

Brunswick Horn



Only movable cabinets give you flexibility!

Storage is only *one* use for classroom cabinets by Brunswick. Up-to-date, economy-minded schools everywhere are using them as easily re-arranged room dividers to set-off study, project and play areas.

This is *flexibility* that built-in cabinets never can offer . . . flexibility that lets the schools you plan meet the changing requirements of the classroom.

Here's new flexibility and bright new color. Here's a saving over costly job-built millwork—in factory-built Brunswick cabinets.

For full details and comprehensive assistance in applying the benefits of movable cabinets to your next school job, see your Brunswick representative.

Brunswick

THE BRUNSWICK-BALKE-COLLENDER COMPANY
623 South Wabash Avenue, Chicago 5, Illinois

PRODUCT REPORTS

(Continued from page 296)

Sealers for the minute spaces in masonry are said to resist penetration of moisture, large concentrations of water and hydrostatic pressure where the masonry is of adequate thickness. For use on concrete, cinder and concrete block, brick and other porous materials used in foundations, basement walls, swimming pools, industrial floors and other heavy-duty applications, it prevents staining of the surface by organic and inorganic, pigmented or oil-base products. Dries in approximately 10 hr. *The Gilbreth Co., 1211 Chestnut St., Philadelphia 7, Pa.*

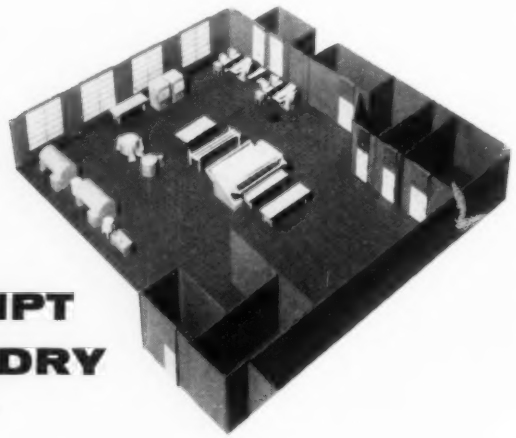
High Fidelity Sound System for use in hotels, restaurants, schools, colleges, churches, halls, commercial buildings and homes consists basically of a "Viscous Damped" tone arm, turntable, amplifier and pre-amp, and speaker. Flexible in size and layout, it can be adapted to meet almost any demands, claims the manufacturer. *Gray Research & Development Co., Inc., Manchester, Conn.*

Flexivent Window Units now feature two major improvements: a *Bar-Lock* underscreen operator, which is said to ensure tight closing of the corners for weathertightness, and precut, toxic-treated *Seal-Trim*, which includes exterior casings, subsill and flashing with a resilient vinyl gasket that makes a tight seal between casings and wall. *Andersen Corp., Bayport, Minn.*

Light Fixture. Polystyrene louver basket providing 45- by 45-deg shielding has been added to the *Skylouver* line of lighting fixtures. The ½-in. *Poly-cube* louver basket is easily removed for cleaning. The unit is made in several sizes to fit all Skylouver fixtures. *Electro Silv-A-King Corp., 1535 S. Paulina St., Chicago 8, Ill.*

Roof Ventilator unit designed to exhaust ventilator ducts serving relatively small areas is available in five throat sizes and 29 capacity ratings, according to static pressures involved. The aluminum is mounted on a low roof curb. Noise level of operation is claimed to be very low. *The Swartwout Company, 18511 Euclid Avenue, Cleveland 12, Ohio.*

Simplified Panic Device has been designed by the Kawneer Company to fit their narrow stile aluminum doors. Said to employ a simplified locking mechanism, the unit has a top bolt release that operates even if the lower bolt socket should become clogged with dirt. The device is UL-approved. *Kawneer Company, Niles, Mich.*



PROMPT LAUNDRY HELP

from planning . . . to upkeep

Troy's strategically located sales and service offices can be of tremendous help to both you and your client. Call in the Troy man to work with you in drawing up a blueprint layout of equipment. And experience-tested laundry layout based on direct work flow — plus modern labor-saving machinery — gives your client the most efficient laundry in the least floor space. And your client ever afterwards enjoys prompt, reliable Troy help on maintenance.

Ask to see the Troy man. Or send for free literature and details on Troy laundry layout service.

Troy
LAUNDRY MACHINERY

TROY LAUNDRY MACHINERY
Division of American Machine and Metals, Inc.
Dept. AR-556, East Moline, Illinois

☐ Have a Troy man call on me.
☐ Send free literature and details on Troy laundry layout service.
☐ Type of laundry ☐ Hotel ☐ Hospital ☐ Institution ☐ _____

FIRM NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
ATTENTION MR. _____

"World's oldest builders of power laundry equipment"

Wherever there's a hydrostatic head or danger of water seepage Karnak Membrane Waterproofing is the best protection you can get.

Karnak membrane fabric is saturated so that it is non-sticking and unrolls easily... to the very end. There is no waste. It "works" faster, lays on wrinkle-free...saves labor cost on the job.

Open mesh, long-fiber-cotton cloth, saturated with specially prepared asphalt so as to leave the mesh open, is layered on the job with alternate moppings of highly refined, ductile asphalt. The open mesh allows the mopping asphalt to penetrate and interlock the layers. This provides a firm, mechanical bond that resists abrasions, settling and cracking thus maintaining water resistance through the life of the structure.

The layering of fabric and asphalt is the only method of waterproofing that insures proper thickness of asphalt throughout the application. For normal application with hydrostatic head up to 15 feet, two plies of fabric are sufficient; hydrostatic head of 15 to 20 feet takes three plies; four plies are sufficient to waterproof any class of work regardless of hydrostatic head.

Whatever *your* waterproofing problem, Karnak will prove best. Bridges, buildings, tunnels, retaining walls, viaducts, swimming pools, all need and use Karnak. The Merchandising Mart, Chicago, Ill., used Karnak over twenty-five years ago... the Fairless Works of U.S. Steel used it last year. Specify Karnak on your next waterproofing job.

Karnak®

manufactured by

Lewis Asphalt Engineering Corp., 30 Church St., New York 7, N.Y.

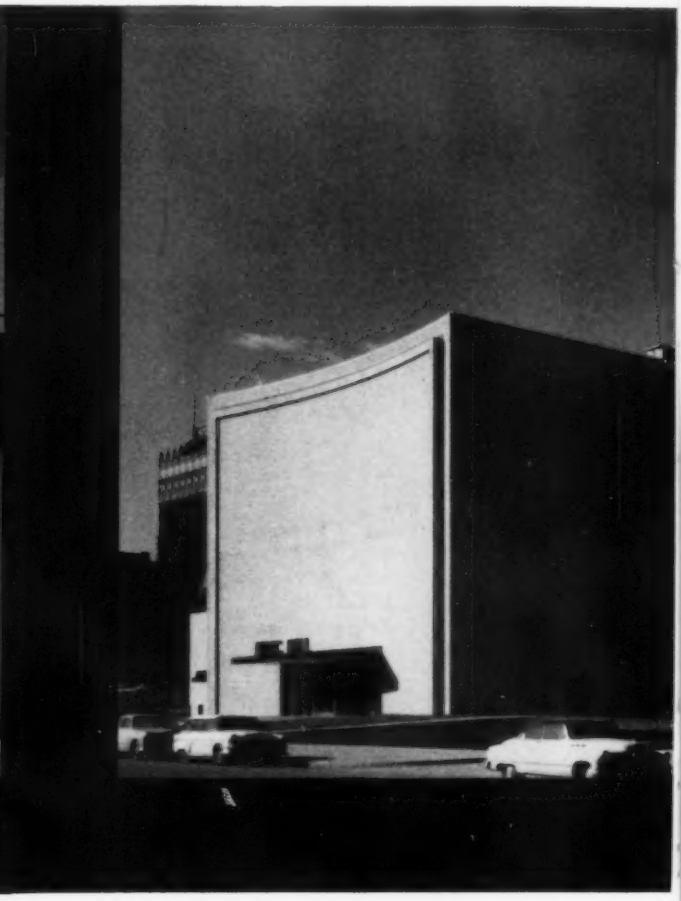
Dept. 112

Asphalt Roof Coatings and Cements • Caulking Compounds • Asphalt Emulsions • Tile Cement
Asphalt Paint • Wood Block Mastic • Joint Filler • Aluminum Asphalt Roof Coating

© L. A. E. Corp.

Arena entrance of the Omaha Civic Auditorium. Ceco-Meyer Steelform concrete floor joist construction and Ceco Open-Web Longspan Steel Joists were used in appropriate floor and roof areas of this building.

View of the music hall, one of the areas where Ceco-Meyer Steelform concrete floor joist construction was used . . . in this case, in the slab levels. Same framing was used for other floors, ramps and concourses.



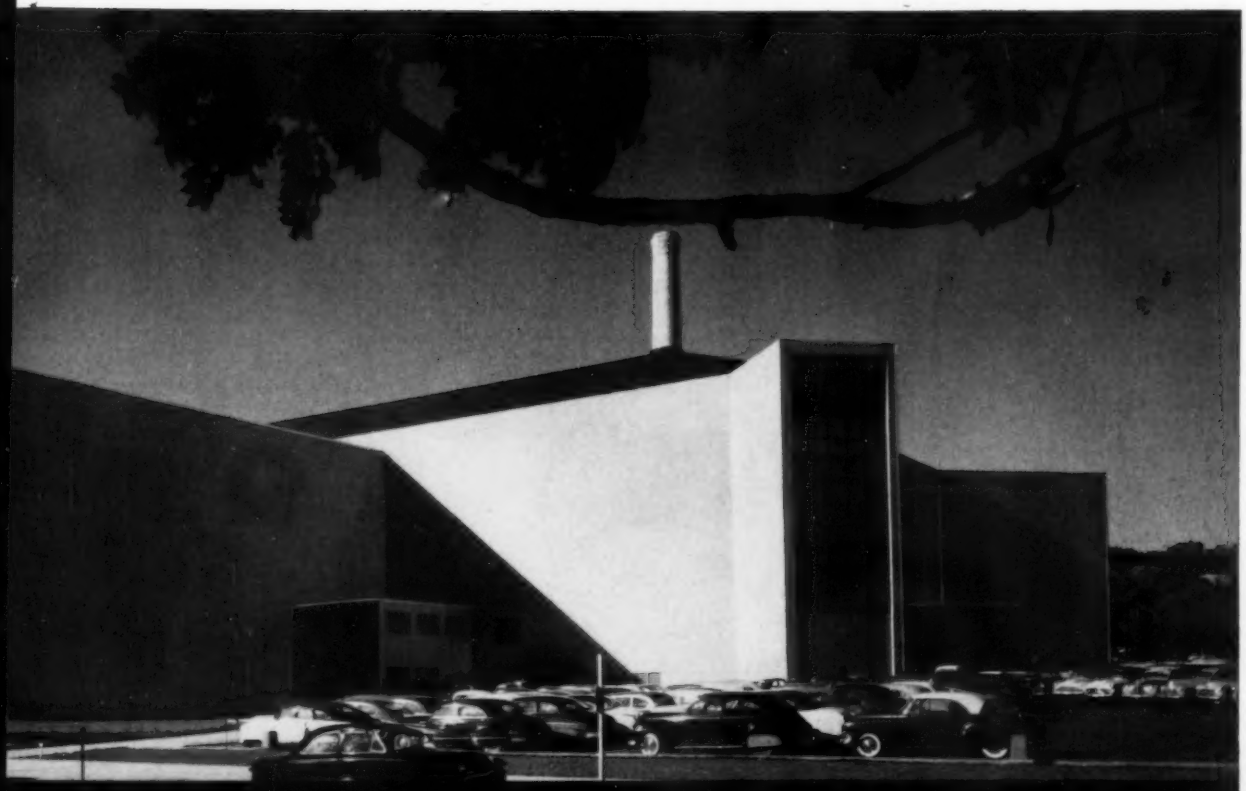
FRAMING METHODS CUT DEADLOAD 30%... SAVE TIME...

PRODUCE RIGID FLOORS AND ROOFS

Ceco helps architects, engineers and contractors meet schedules for finest buildings. It takes a lot of material to build a safe public structure of ten million cubic feet. Weight could be a problem. That was the condition confronting Leo A. Daly Company, architects and engineers, in designing the Omaha Civic Auditorium. They determined 30% in concrete load could be saved by using Ceco-Meyer Steelform concrete joist construction for floors, concourses, ramps and balconies. Similar weight savings were made by using Ceco Open-Web Longspan Steel Joists in areas of the roof. Architect Daly put it this way:

"Metal pan rib floors were used where loading and span permitted. Though the weight is light, the depth of the floor produces great rigidity. Formwork is economical, requiring only a simple centering board for the soffit form under each rib or joist. Longspan Steel Joists used in appropriate roof areas cut weight, too, as compared to heavier standard truss and purlin construction."

When Peter Kiewit Sons' Company set up the building schedule, Ceco service went into action, delivering all material as needed—on time. For the best in floor framing methods and service, call in your Ceco Engineer.



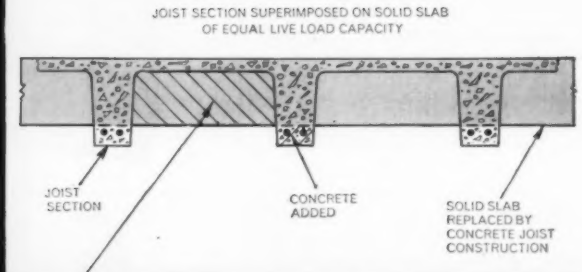
This is the Omaha Civic Auditorium, showing the music hall entrance at left and the exhibit hall entrance at right. Leo A. Daly Company, Architects and Engineers; Peter Kiewit Sons' Company, General Contractors.

CECO STEEL

CECO STEEL PRODUCTS CORPORATION

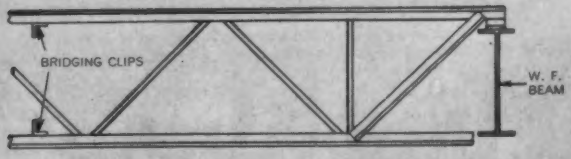
Offices, warehouses and fabricating plants in principal cities
General Offices: 5601 West 26th Street, Chicago 50, Illinois

IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE


JOIST SECTION SUPERIMPOSED ON SOLID SLAB
OF EQUAL LIVE LOAD CAPACITY
JOIST SECTION
CONCRETE ADDED
SOLID SLAB REPLACED BY CONCRETE JOIST CONSTRUCTION

HERE'S THE ECONOMY OF CONCRETE JOIST CONSTRUCTION

Ineffective concrete eliminated by a shape of section which allows maximum depth for rigidity and minimum deflection. Savings in material and dead weight thus result in better structural performance.



STEEL JOIST CONSTRUCTION SAVES WEIGHT

Open-Web Steel Joists comprise the lightest standard construction and cut framing time by months, compared to heavier, slower methods. They permit wide open floor areas with fewer columns.

NOW . . . an accurate, dependable

ELECTRONIC TIME and SIGNAL SYSTEM

Architects everywhere recognize the great need for time signals to regulate heavy student traffic, especially in today's burdened secondary schools. They know, too, that dependability and accuracy are essential to the success of the system they choose.

System Suits Varied Needs

This new *electronic* system — *by Stromberg* — has many advantages, some of them unique. Here are a few: incorporates latest developments in electronic components; highly flexible program permits timing of several different signal schedules; manual signals, if needed, can be sounded instantly; automatic synchronization of all clocks every hour. Power interruption? The jeweled master clock movement, a superb example of technical craftsmanship, operates from its spring power reserve. Upon power resumption, program unit is immediately and accurately reset; 12-hour correction feature is *standard* — correction completed within one minute. Inherent throughout this new *electronic* system is the reliable, precision construction for which Stromberg has gained widespread recognition.

Ask, too, about **Fire Alarm Equipment**
Attendance Recorders
Time Stamps

For complete details about the most reliable time and signal equipment made, write

Stromberg

SUBSIDIARY OF GENERAL TIME CORPORATION

GT GENERAL TIME

TIME CORPORATION

THOMASTON, CONNECTICUT

OFFICE LITERATURE

(Continued from page 238)

Timber Connectors are discussed in a 12-page catalog of the new Teco fasteners for 1956. Six connectors and the technical data on their use are discussed. In addition, Teco services to customers are listed. *Timber Engineering Co., 1319 18th St., N. W., Washington 6, D. C.**

Roof Decks. Uses and properties of *Tectum* wood fibre roof decks are covered in a 16-page catalog (AIA File 37-B-1). Technical information on installation, specifications, loading tables and methods of application to various framing systems is covered. *Tectum Division, Peoples Research and Mfg. Co., 152 S. 6th St., Newark, Ohio.**

Glass Block. A 24-page booklet catalogs glass block patterns and new designs in light and solar heat controlling blocks. There are tables on dimensions and solar heat control and a section on how to calculate illumination and brightness. AIA File 10-F. *Kimble Glass Co., Toledo 1, Ohio.*

Metal Compartments. Toilet compartments, hospital enclosures and dressing compartments are covered in the new color catalog (AIA File 35-H-6) put out by the *Cutler Metal Products Co., Camden, N. J.**

Lighting Specifications. The 1956 edition of the RLM Standard Specifications for Industrial Lighting Units has just been published. The booklet contains many revised specs. *RLM Standards Institute, 326 W. Madison St., Chicago 6, Ill.*

Lighting Fixtures. The new line of fixtures by *Art Metal* is cataloged in a 12-page booklet (No. 1055) that also lists the technical information needed on each fixture. *Art Metal Company, Cleveland 3, Ohio.**

Acoustical Systems are discussed in a 4-page brochure which provides details on the three types of acoustical suspension (Types X, Y and Z) available from *Loxit Systems, Inc., 1217 W. Washington Blvd., Chicago 7, Ill.*

Wood Library Equipment is cataloged, with dimensions and illustrations, in an 8-page brochure from *Valverde Co., Inc., Scranton 9, Pa.*

(Continued on page 308)

for greater space flexibility...**now** and **later**...

J-M Class A Asbestos Walls are movable . . . save space and make space . . . are noncombustible, moderately priced . . . come in pleasing colors

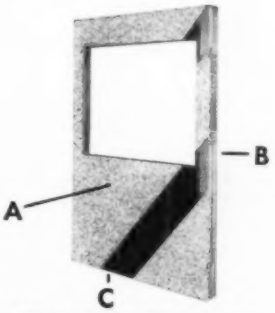
New Johns-Manville Class A Movable Walls offer you advantages never before combined in an asbestos movable wall. They are modestly priced. They are noncombustible. They have a textured, stipple finish in restful colors. They reduce maintenance and relocation costs to a new low.

The finish of Johns-Manville Class A Movable Walls is a tough, hard film much thicker than on the usual movable partition. It is mar- and scratch-resistant . . . rejects stain and soil . . . can be easily washed and even scrubbed, if necessary. If damaged, it can be touched up inexpensively to look like new . . . and, unlike other types of factory-finished partitions, can be repainted with ordinary paint.

Undivided responsibility for a complete job

These flush or glazed partitions are erected as well as furnished by the Johns-Manville Construction Department complete with doors, door hardware, glass and trim.

For details about J-M Class A Asbestos Walls, consult your Sweet's Architectural File, or write Johns-Manville, Box 158, Department AR, New York 16, New York. In Canada, write 565 Lakeshore Road East, Port Credit, Ontario.



A Noncombustible asbestos-cement surfaces

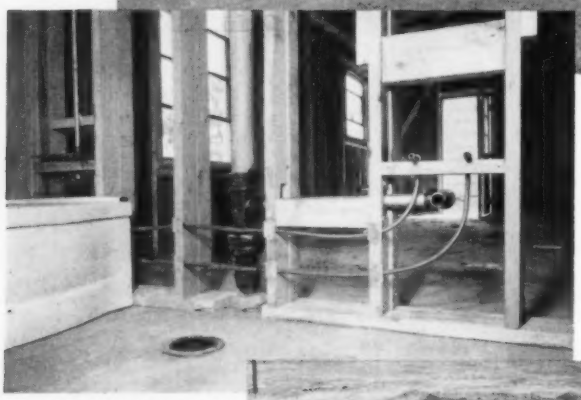
B Generous reinforcing for added strength

C Noncombustible all-mineral insulating core

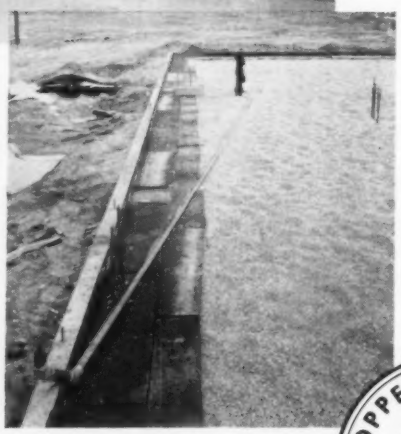
See "MEET THE PRESS" on NBC-TV, sponsored on alternate Sundays by Johns-Manville

JOHNS-MANVILLE JM PRODUCTS **Johns-Manville**

"WE SAVED $50



(Above) Typical bathroom hook-up with Revere Copper Water Tube. Note how the contractor, CLAY-POOL PLUMBING & HEATING COMPANY, used steel plates where tube crosses the two-by-fours. This permits tube to be placed in notched studs with ease and without sacrificing protection of the tube. Also, consider the time and number of joints and fittings saved by bending the soft copper tube in concealed locations like the one shown.



(Above) Here you see a 1½" Revere Copper Water Tube, Type "L" drainage line running from the kitchen sink before concrete slab was poured. Note how builder took advantage of the single, long, light, straight lengths of Revere Copper Water Tube . . . no extra joints, caulking or thread cutting here. In addition the builder had no fear of copper rusting when buried in the concrete slab. Revere Copper Water Tube also was used for service lines and internal water distribution.

Shown directly above is one of the homes erected by GRANT-HOLLADAY in Newcom Knolls, a suburb of Dayton, Ohio. These homes are prefabs with an option of 4 bedrooms or 3 bedrooms and a dining room. Lots average 60' x 125'. Full price is $10,750. This house is typical of the more than 1,100 which GRANT-HOLLADAY plans on erecting in Canton, Youngstown and Piqua, Ohio.

When you consider that GRANT-HOLLADAY saves $50.00 per home by using Revere Copper Water Tube and then multiply this saving by the 1,700 homes they have completed and plan to erect, you have a saving of $85,000! And that, Mr. Architect, Mr. Builder and Mr. Contractor, "ain't hay!"

If that kind of money can be saved in homes within this price range, think of the savings that can be realized when you get into the higher price brackets. That's why it will pay you to plan on copper in all your future homes . . . for underground service lines, hot and cold water lines, radiant panel heating, air conditioning, drainage, waste and vent lines. See your Revere Distributor. And if there is anything inwolving the installation of Revere Copper Water Tube that's bothering you, he'll be glad to put you in touch with Revere's Technical Advisory Service.

COPPER ★ BRASS ★ 18 01 ★ REVERE ★ ALUMINUM

Revere Copper and Brass Incorporated
Founded by Paul Revere in 1801
230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Brooklyn, N. Y.; Chicago, Clinton and Joliet, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Newport, Ark.; Rome, N. Y.

Sales Offices in Principal Cities, Distributors Everywhere.

PER HOUSE by using *REVERE COPPER WATER TUBE* in our plumbing and drainage lines"

"To enable us to construct these houses in Newcom North and Newcom Park and sell them at the low sale price of $10,750 and still make a profit, it has been necessary to incorporate any and all time-saving devices available. With this pre-cut and pre-assembled type of construction, the use of copper with its ease and speed of installation was dictated. It soon became apparent that the $50.00 saving per house effected through the use of Revere Copper Water Tube, coupled with the added sales appeal, made copper the logical choice."

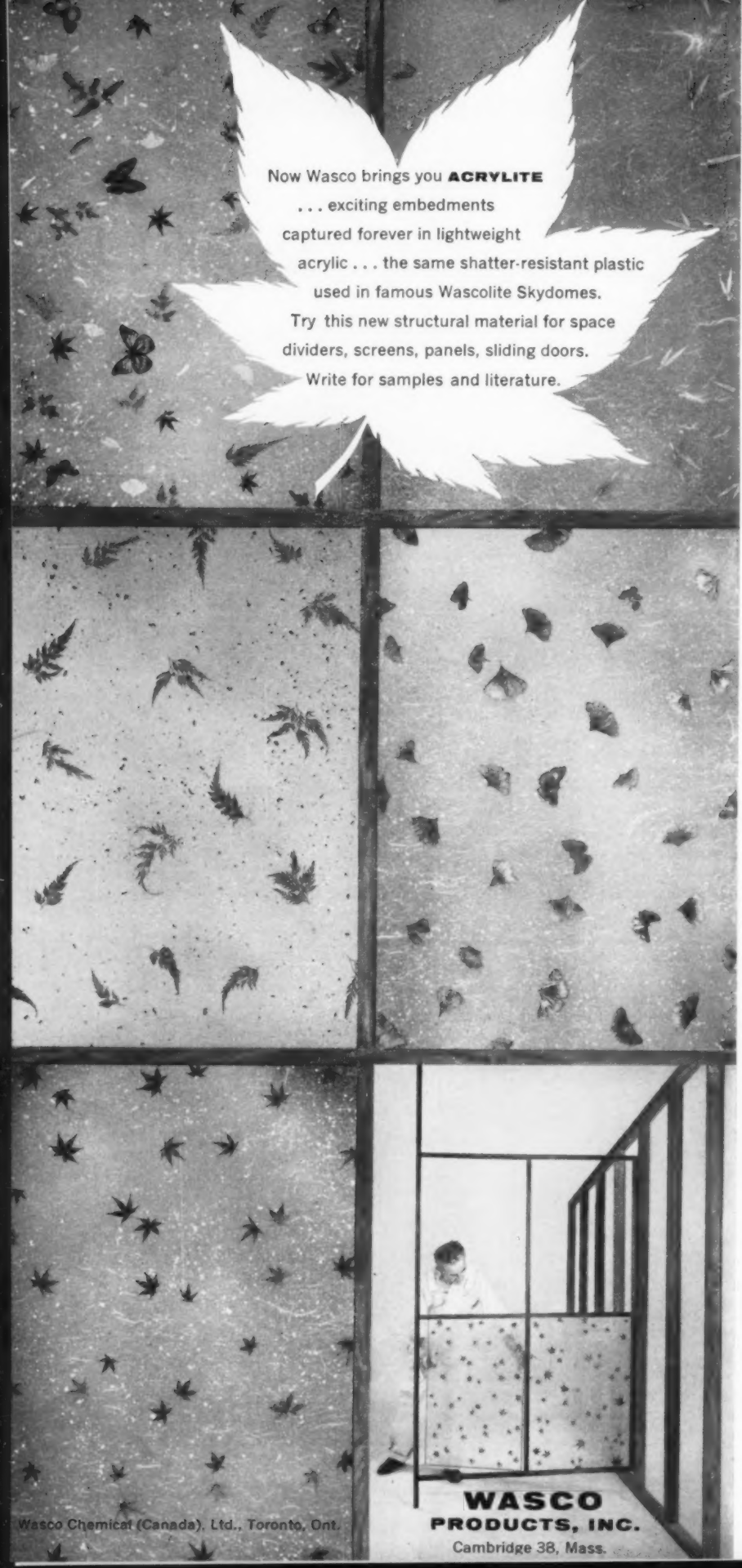
Says, Wallace F. Holladay, President
GRANT-HOLLADAY CORPORATION
Dayton, Ohio

"This business of contractors saying that copper is expensive to install is being disproved every day. Our experience has proved just the opposite. Copper water tube not only does *not* cost more to install than rustable materials, it actually costs less . . . in the case of these homes that GRANT-HOLLADAY built it was $50.00 less, *per home!* The reasons are obvious: solder fittings, fewer fittings, long lengths, ease of handling and bending, and the prefabrication of certain assemblies in the shop."

Says, Charles Claypool, President
CLAYPOOL PLUMBING & HEATING COMPANY
Kettering, Ohio

"We have furnished CLAYPOOL PLUMBING & HEATING COMPANY with approximately 160,000 pounds of Revere Copper Water Tube for the 1,700 homes that GRANT-HOLLADAY is building. Handling Revere Copper Water Tube is good for us, not only from a prestige standpoint, as contractors and builders know it is of the highest quality, but I've found that when Revere says they'll deliver on a certain date, they deliver . . . and that's mighty important to a distributor."

Says, R. J. Makarius, President
ACME PLUMBING SUPPLY COMPANY
Dayton, Ohio


Now Wasco brings you ACRYLITE
. . . exciting embedments
captured forever in lightweight
acrylic . . . the same shatter-resistant plastic
used in famous Wascolite Skydomes.
Try this new structural material for space
dividers, screens, panels, sliding doors.
Write for samples and literature.
WASCO
PRODUCTS, INC.
Cambridge 38, Mass.
Wasco Chemical (Canada), Ltd., Toronto, Ont.

OFFICE LITERATURE

(Continued from page 304)

Elevators. *The Modern Hospital . . . and Its Elevator Needs* is a 24-page booklet which discusses planning for vertical transportation, car interiors, operation, space requirements, fright elevators and dumbwaiters. *Otis Elevator Co., 260 11th Ave., New York 1.**

Air Conditioning. Abbreviated case histories of architectural solutions to problems of efficient and economical air conditioning in both old and new buildings are presented in a quick-reference file folder (A-932) published by *E. I. du Pont de Nemours & Co., "Kinetic" Chemicals Div., Wilmington, Del.*

Pipe and Fittings. *Orangeburg* rootproof or perforated bituminized-fibre drain and sewer pipe and fittings are described in an 8-page catalog (No. 307) (AIA File 29-B-6) available from *Orangeburg Mfg. Co., Inc., Orangeburg, N. Y.**

Expansion Joint Design Guide. Catalog 153, 24 pp, includes a discussion of *Flexon* expansion joints and the types of pipeline motion solved by them. *Flexonics Corp., 1366 So. Third Ave., Maywood, Ill.**

Architectural Porcelain for curtain wall construction and facing for exterior and interior construction is the subject of a 16-page brochure which presents detail drawings with the several types of panels available shown in color to indicate location and methods of fastening. (AIA File 15-H-2) *Davidson Enamel Products, Inc., 1104 E. Kirby St., Lima, Ohio.**

Tile for Swimming Pools is a 12-page booklet which contains the latest recommended standards for indoor pools as approved by the Amateur Athletic Union of the U. S., the National Collegiate Athletic Association and the YMCA. Manual 800 also includes a number of detail drawings and basic tile specifications for both indoor and outdoor pools. *American-Olean Tile Co., 1000 Cannon Ave., Lansdale, Pa.**

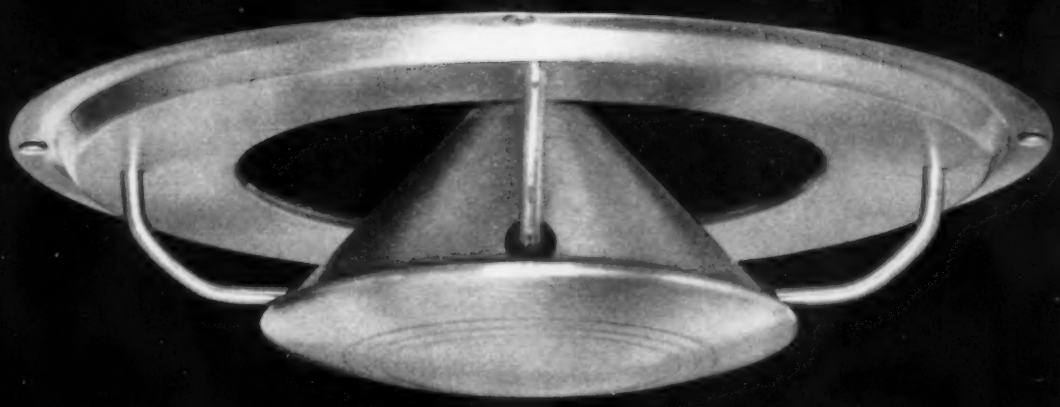
Church and Public Building Lighting is the title of a new catalog showing contemporary designs specifically adapted for modern building concepts. AIA File 31-F-2. *R. A. Manning Company, 1810 North Ave., Sheboygan, Wis.*

(Continued on page 312)

HEARD EVERYWHERE

Lowell®

THE SOUND CHOICE / AL SERIES BAFFLE



Beautiful . . . in appearance and in performance.

Mounts flush for low-ceiling areas. Effective 360° dispersion of clear "ear level" sound. Conical diffuser "floats" on soft rubber grommets. Heavy gauge aluminum. Sizes available for 6" to 15" speakers. Easily installed.

LOWELL: One source for immediate delivery. More than 100 models of ceiling and wall baffles, enclosures, grilles, accessories, intercom equipment.

Write for complete information and specifications.

World-wide representation

HEARD EVERYWHERE Lowell MANUFACTURING CO.
3030 LACLEDE STATION ROAD • ST. LOUIS 17, MISSOURI
IN CANADA: ATLAS RADIO CORP., LTD., 50 WINGOLD AVENUE, TORONTO 10, ONTARIO

see our catalog in S Sweet's or write for copy

DOW

THE LUXURY LOOK

Give your homes the extra touch of luxury with Guaranteed Styron Plastic Wall Tile

The Luxury Look comes to any home quickly and easily with guaranteed Styron® plastic wall tile. An almost unlimited range of modern colors and shapes (popular king size squares above, interesting new brick shapes, left) give rooms the look of luxury that sells homes *fast.*

From a practical standpoint, you can profit more with Styron plastic wall tile. Walls need no expensive pre-preparation. Your crews can install Styron tiles more easily, more quickly, and finish with a handsome job every time. See your Styron plastic wall tile supplier today. He'll give you the same guarantee of quality that has made all America plastic wall tile conscious! THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Dept. PL 417L.

The Luxury Look adds charm and smart splendor to the bathroom. Prospects appreciate the tastefulness and practicality of Styron tiles—the way they clean so easily, stay lustrous for years. Here are fast-selling regular size tiles, available in more than 50* modern decorator colors. Mix or match them and watch your homes sell faster!

*Color lines vary with tile manufacturers

All through the house, you can add so much in real value to your homes with Styron plastic wall tile. It's a blessing in the laundry, for instance . . . splashes wipe clean in a whisk. In recreation rooms, nurseries, powder rooms, utility rooms—anywhere you choose—Styron plastic wall tile is the year's most exciting sales clincher!

Here are your guides to the right choice in Guaranteed Plastic Wall Tile

First thing to do is get in touch with a certified dealer of guaranteed plastic wall tile. You can identify him by the emblem at the left. He is a reputable businessman who will give you a written guarantee (center) that the plastic wall tile and mastic he sells you conform to quality standards established with the National Bureau of Standards. He can guarantee that tile adhesives and installation meet minimum property requirements for F.H.A. loans. The Styron label at the right identifies tiles made of dependable Dow polystyrene. When you install Styron plastic wall tile in the homes you build, you're getting the benefit of the best-established prestige name in the industry. There's the package: THE LUXURY LOOK, Guaranteed STYRON Plastic Wall Tile—and more *profits* for you!

you can depend on DOW PLASTICS

DOW

The Complete Adding Unit

All Underwood Sundstrand Adding Machine Models handle forms as well as paper tape. Enable you to make the record and do the addition at the same time:

- Prepares duplicate monthly accounts receivable statements for ledgerless bookkeeping, balances pen and ink accounts receivable records simultaneously.
- Prepares duplicate bank deposit slips faster with more accuracy.
- Prepares employee payroll earnings statements, in duplicate, and computes net pay simultaneously.
- Does all the regular adding, subtracting, multiplying and dividing you should expect from a complete adding machine.

The Underwood Sundstrand 10-Key Figure-Speed Keyboard gives greater speed with one hand touch operation.

Call your Underwood Office for a demonstration of the complete adding unit for your own requirements.

UNDERWOOD CORPORATION
One Park Avenue New York 16, N. Y.

OFFICE LITERATURE

(Continued from page 308)

Office Partitions and Furniture. *A New Way of Life in the Office* is the title of a 16-page brochure which shows the use of Arnot Partition-ettes, modular furniture and Office-ettes in steel and wood. Catalog AF-112. *Arnot-Jamestown Div., Aetna Steel Products Corp., 730 Fifth Ave., New York, N. Y.*

Fine Hardwoods Selectorama describes over 400 commercially available species of hardwoods, giving geographical source, color, pattern, characteristics, common uses, availability and general price range, with 146 illustrations. 60 pp. $1.50. *Fine Hardwoods Assoc., 666 Lake Shore Drive, Chicago 11, Ill.*

Masonite Presdwood Products is a 20-page 1956 edition of a guide for architects which contains drawings, photos and tables showing properties and available sizes, descriptions of various hardboard types, directions for use, application details and specifications. *Masonite Corp., Service Bureau, 111 W. Washington St., Chicago 2.**

Radiant Ceiling that heats or cools and incorporates sound control is covered in Bulletin A-138, which includes component parts and methods of installation as well as performance charts and control methods. *Burgess-Manning Co., Architectural Products Div., 5970 Northwest Highway, Chicago, Ill.*

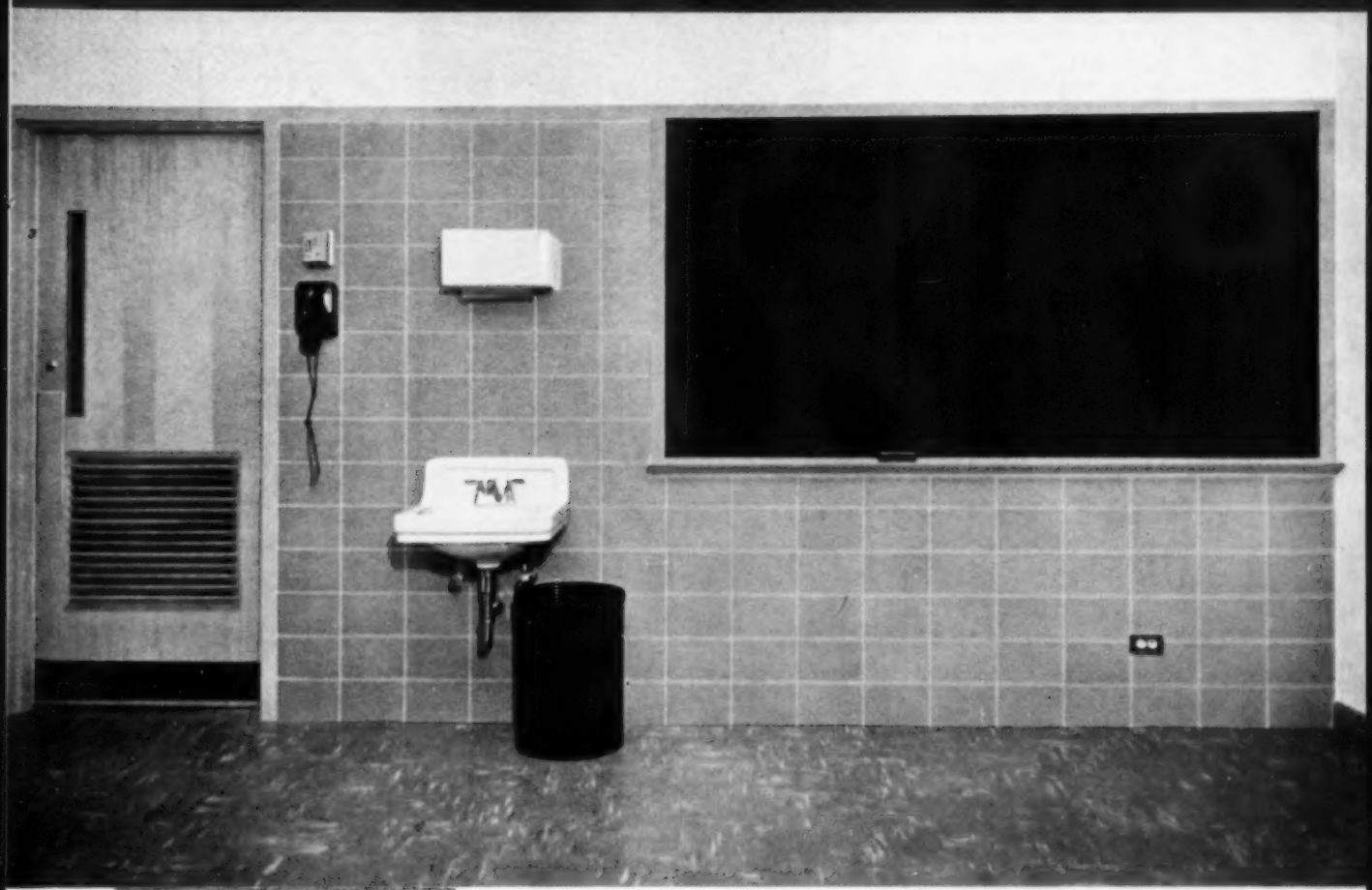
Sliding Door Hardware. Catalog 19, 24 pp, presents photographs of actual installations, specifications, schematic drawings and other data about interior sliding door hardware, pocket door T-frames and casement window hardware. (AIA File 27-A) *Sterling Hardware Mfg. Co., 2345 W. Nelson St., Chicago 18, Ill.**

Cold Storage Doors. A 20-page booklet recommends doors for every standard operating requirement and covers temperatures, insulation, type of door swing and sill construction. *Jamison Cold Storage Door Co., Hagerstown, Md.**

11 Ways to Save Drafting Time is a booklet which discusses the many ways of using intermediates to make quick modifications of drawings without changing the original. *The Frederick Post Co., Reader Service Div., 3666 N. Avondale Ave., Chicago 18, Ill.*

(Continued on page 316)

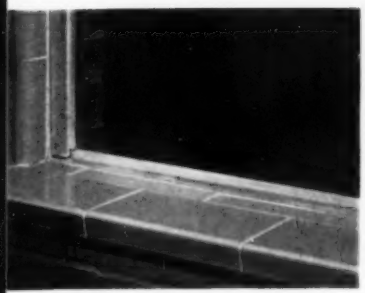
ROMANY *Real Clay* TILES



Northfield High School, Northfield, Minn. Magney Tusler & Setter, Archts., Minneapolis, Minn.

ight: Romany
irect Adhesion
ase Tile in all
atching colors.

elow: Romany
indow stools
re easily
leaned and
ney are stain
roof.



Romany Tile protects wall surfaces in schools throughout the country. Wide range of fade proof colors.

for SCHOOL

CLASSROOMS — CORRIDORS
REST ROOMS — CAFETERIAS
GYMNASIUMS — AUDITORIUMS
STAIRWAYS AND OTHER AREAS

BEST PROTECTION FOR "SCUFF" AREAS

It is generally accepted that the minimum zone of damage to wall surfaces extends from floor to 4 feet up. Greater tile protection extending 8 to 10 feet high is ideal, and, depending on local construction costs, it has been found that this extended protection is a negligible factor in the over-all building cost. Because ROMANY Real Clay Tile offers the toughest clay body and glazed surface procurable today, it has extraordinary protection value to meet scuffing, kicking, scraping and other abuses common to school life.

Write for our "School Folder"

UNITED STATES CERAMIC TILE COMPANY

And Its Subsidiary, THE SPARTA CERAMIC CO.

Member: Tile Council of America and Producers' Council, Inc.

217-H FOURTH ST., N.E., CANTON 2, OHIO

ARMCO STEEL CORPORATION
1346 Curtis Street, Middletown, Ohio

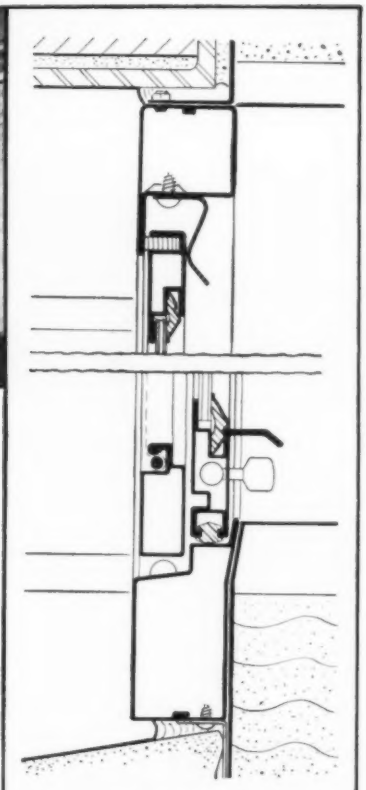
Please send me information on tubular steel windows made of Armco ZINCGRIP. We are considering them for:

Name_____

Firm_____

Street_____

City_____ Zone____ State_____



HEAD AND SILL DETAILS

Armco ZINCGRIP Steel Gives Windows Durability, Maximum Rigidity and Attractive Appearance

When you specify windows for institutional, apartment or residential construction, you can be sure of client-satisfaction when they're made of Armco ZINCGRIP Steel.

ZINCGRIP, sheet steel coated with zinc by a patented, continuous hot-dip process, combines the strength of steel with unbroken zinc protection against rust. Added protection and attractive finish are easily provided because windows made of ZINCGRIP are pretreated by the manufacturer for immediate painting.

Tubular Construction Possible

The special coating on ZINCGRIP doesn't flake or peel even when it is severely formed. That's why rigid tubular frames and panel members can be formed of ZINCGRIP without damage to the coating. Finished windows combine maximum strength and rigidity with light weight, plus continuous zinc protection.

Tubular construction with ZINCGRIP also offers additional advantages. Sturdy, narrow frames give maximum glass area and help assure weathertight, maintenance-free service.

Specify windows made of Armco ZINCGRIP Steel and let its many architectural advantages work for you and your clients.

For additional information on steel windows made of Armco ZINCGRIP, just fill out and mail the coupon.

Architects: Pauly, Hauck & Welch

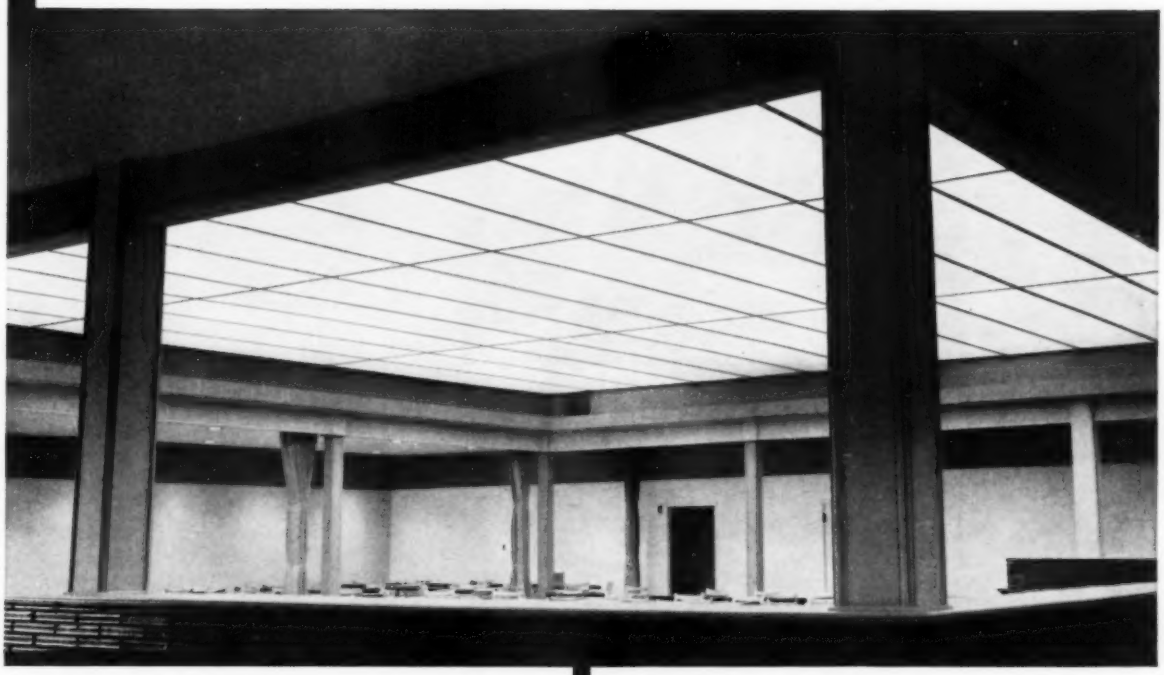
AIA prize-winning Evangelical and Reformed Church Home of Buffalo, New York. Tubular windows made of ZINCGRIP Steel were specified throughout this $575,000 project.

ARMCO STEEL CORPORATION
1346 CURTIS STREET, MIDDLETOWN, OHIO

ARMCO®

SHEFFIELD STEEL DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION

DESIGN CUSTOM LIGHTING ECONOMICALLY WITH A LUMENATED CEILING *by thermotank*



SELECTED AREAS, rectangular or with irregular perimeters of any shape, can be effectively lighted by the Lumenated Ceiling, giving a pleasantly illuminated environment, such as in this restaurant. The flexibility of the Lumenated Ceiling offers a wide variety of interesting design patterns.

WALL-TO-WALL, glare-free lighting for stores, offices, libraries, schools and lobbies is easily and economically controlled by a Lumenated Ceiling of lightweight, corrugated white plastic. Highly practical for remodelling as well as new construction. Underwriters' Laboratories' label.

The LUMENATED CEILING

by thermotank gives you wide scope in interior design and illumination—in planning attractive ceiling patterns, custom light distribution, acoustical treatment with or without baffles, air conditioning ducts and diffusers.

Thermotank's system of suspending continuous rows of corrugated plastic is readily adapted to any size or shape of area or any irregularities of ceiling construction. Framework and plastic weigh less than ¼ pound per square foot. Installation is simple and economical. Thermotank, Inc., Detroit 34, Mich.

Mail coupon for literature and name of nearest representative or contact the local Westinghouse Electric Supply Co.

JOHN J. FANNON & COMPANY
1469 ALGONQUIN AVE., DETROIT 15, MICH.
***West Coast:* 2205 San Francisco Ave., Long Beach 6, Calif.**

Please send me Thermotank's Lumenated Ceiling Catalog LC-7 and name of nearest representative.

Name_____

Organization_____

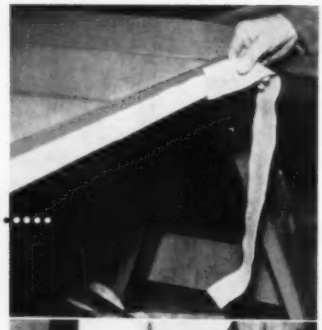
Address_____

City_____ Zone____ State_____

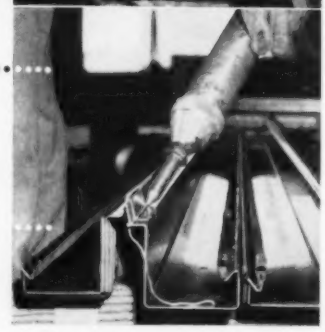
PRESSTITE
SEALING COMPOUNDS
WEATHERSEAL
25-story curtain wall skyscraper*

*Equitable Life Assurance Co. San Francisco, Calif

Note neat, clean application of Presstite Permagum® 576.1 sealing tape to edge of aluminum panel. Excellent adhesive qualities keep it in place while section is set into position. Once installed, it provides a permanently elastic, shrinkproof seal.



Neither water, dust, nor air will pass beyond gun-applied bead of Presstite No. 579.6, as it is applied to this stainless steel mullion. Flange will fit over edge of decorative aluminum panel to form a completely weather-tight metal-to-metal joint.



Presstite formulates and manufactures many types of sealing and caulking compounds for window glazing, general caulking, expansion joints and curtain wall construction.

WRITE for literature, technical data, working samples.

Architect:
W. D. Peugh (deceased), San Francisco
A. J. Loubet and W. B. Glynn (successors)
San Francisco
Consulting Architect:
Irwin Clavan, New York

PRESSTITE SEALING COMPOUNDS
PRESSTITE ENGINEERING COMPANY
3748 Chouteau Ave. • St. Louis 10, Mo.

OFFICE LITERATURE

(Continued from page 312)

Radiant Heating Construction is the title of an 8-page bulletin which offers accepted procedures for radiant heating systems. The booklet covers floors, heating slabs, heating coils, insulation base or fill, waterproof membrane and support brackets for radiant heating coils. *A. M. Byers Co., Box 1076, Pittsburgh.**

Liquid Chillers. Two new catalogs cover (1) *Flow-Therm* packaged liquid chillers for the C and R series (capacities of 20 through 175 tons and 15 through 300 tons, respectively) (Catalog 220B), and (2) the DXF Series Dry-Ex with star insert tubing and the DXH Series with plain tubing (Catalog 600A). Another catalog, 210B, covers *Flow-Temp* remote room conditioners. *Acme Industries, Inc., Jackson, Mich.*

Control Consoles for central sound distribution systems are described in non-technical language in a 6-page catalog from *Radio Corporation of America, Camden, N. J.*

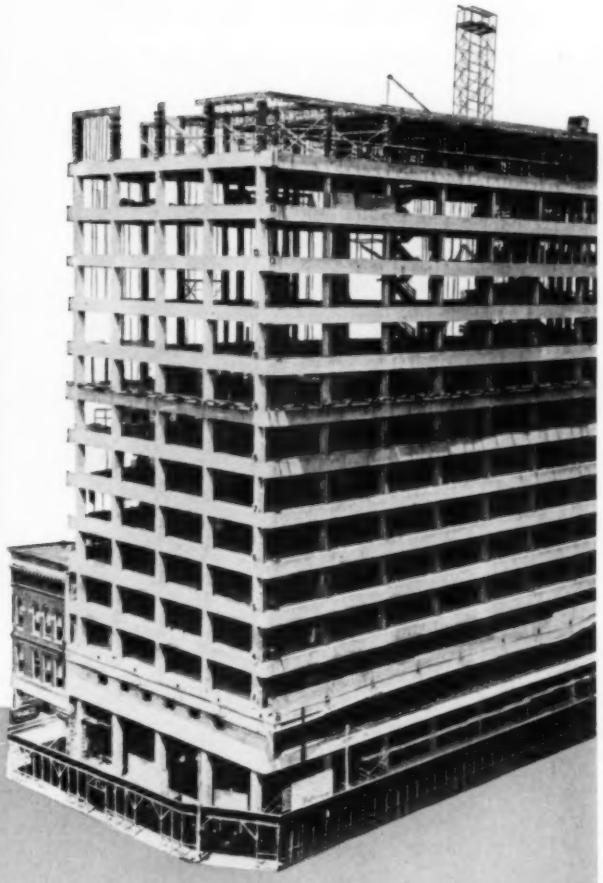
Built-in Corrosion Control is the theme of a catalog which describes protective coating systems for structural steel, tanks, piping, ductwork and other types of industrial structures and equipment. *Amercoat Corp., 4809 Firestone Blvd., South Gate, Calif.*

Electric Power Busway having reactance values said to be eight to 23 times those of conventional feeder busways is described in an 8-page bulletin (GEA-6469) from *General Electric Co., Advertising & Sales Prom., Distribution Assemblies Dept., Plainville, Conn.**

Pipelines to the Future is a comprehensive and technical market study offering detailed charts and tables comparing the performance and cost of important plastic and metal pipe materials and providing an analysis of manufacturing and distribution costs for five important types of plastics. $1.00. *Monsanto Chemical Co., Springfield 2, Mass.**

Systems of Lightweight Construction is a 16-page booklet which covers machine or manual application of vermiculite for roofs, floors, ceilings and walls and includes fireproofing construction and product and application specification sections. (AIA File 3-D-3) *Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.**

how long can you afford to wait for your next building?



buildings start quicker...
are completed sooner with

REINFORCED CONCRETE

Reinforced concrete structures start quicker because all the necessary materials are readily available from local stocks. These faster starts, made possible with reinforced concrete, save months of delay . . . months which will mean reduced interest charges . . . earlier occupancy and extra rental income which could amount to many thousands of dollars.

Whatever your next building may be—hotel, hospital, apartment, or office—reinforced concrete can provide a better structure for less money. It assures rugged strength that is highly resistant to wind, shock, and quake, and is firesafe without extra treatment. No other method of construction provides so great a flexibility of design. On your next job . . . avoid costly delays—design for reinforced concrete!

First National Bank Building*
Jackson, Mississippi

Associated Architects:
N. W. Overstreet and
James T. Canizaro
Jackson, Mississippi

Structural Engineers:
Post & Witty
Jackson, Mississippi

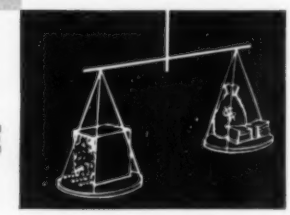
Contractor:
Southeastern Construction Co.
Charlotte, N. C.

* Reinforced Concrete Frame with R/C Duct Floors

Compare . . . YOU'LL SAVE WITH REINFORCED CONCRETE

CONCRETE REINFORCING STEEL INSTITUTE

38 South Dearborn Street • Chicago 3, Illinois



REYNOLDS ALUMINUM IN MODERN ARCHITECTURE

REYNOLDS

The Vaughn Building, Dallas, Texas

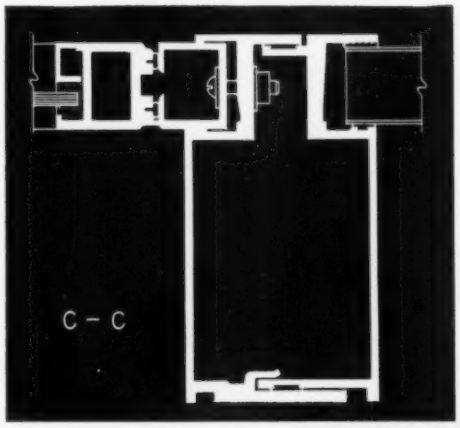
Owner
The Spartan National Life Insurance Co.,
Jack C. Vaughn, President

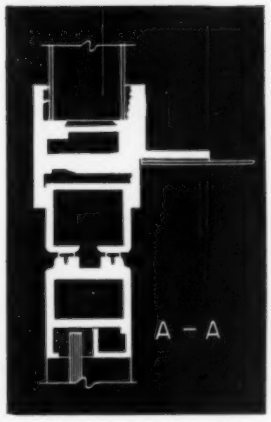
Architect-Engineer
Wyatt C. Hedrick, Dallas

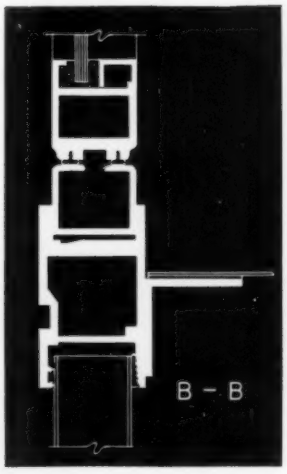
General Contractor
The Henry C. Beck Co., Dallas

Integrated Wall System Fabricator-Erector
Texlite, Inc., Dallas

Reynolds Aluminum Applications in this Building
Windows • Vertical Mullions • Fins (anodized gold)

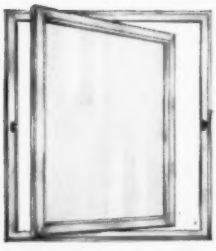


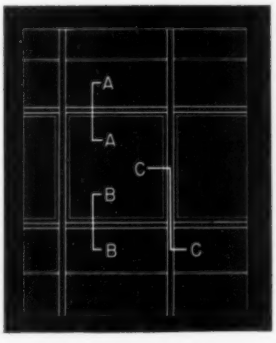




REYNOLDS ALUMINUM SERVICE TO ARCHITECTS

Reynolds Architect Service Representatives offer specialized assistance on aluminum design problems, on applications of standard aluminum mill products, and on the use of commercially fabricated aluminum building products. They can help to coordinate varied aluminum requirements for procurement efficiency and economy. Inquiries should be addressed to... Architect Service, **Reynolds Metals Company,** Louisville 1, Ky.





REYNOLDS SERIES 100 VERTICALLY PIVOTED WINDOW used in the Vaughn Building. Provides minimum air infiltration, positive locking. Revolves easily for washing from the inside. All welded frame construction. Self-draining.

See "FRONTIER," Reynolds great dramatic series, Sundays, NBC-TV Network.

ALUMINUM

PICKING A FINISH FOR A GYM?

Adolph Rupp
University of Kentucky

Blair Gullion
Washington University

Andy Anderson
Bowling Green State University

Cliff Wells
Tulane University

Bob Polk
Vanderbilt University

H. W. Hughes
Colorado A & M

Ask the men who'll use that floor what they think of SEAL-O-SAN®

Nothing is so important in choosing the finish for a gymnasium floor as the assurance that the finish will prove to be ideal under playing conditions. Beauty, ease of maintenance, are important, but secondary. A gym floor will be used for *fast action*. The proper finish helps to make possible fast breaks and assures the safety of quick foot work. Without the feeling of safety, team members lose confidence and cannot play well together.

The coaches above know the importance of a good floor finish. All agree . . . "Seal-O-San helps my teams win games." Your clients will quickly recognize this plus value of Seal-O-San Gym Floor Finish.

Seal-O-San is a finish that is easy to apply. It enhances the beauty of hardwood. It simplifies daily maintenance, and reduces refinishing costs. No matter what the size of the floor—from the gigantic field house to the village community gym, there is one best answer to the finishing problem, Seal-O-San.

Ask the school man, chances are good that he knows the superiority of Seal-O-San and would prefer it on his floor. If you are designing a gymnasium now, write us for facts on proper finishing.

See our catalog in Sweet's—13M.

SEAL-O-SAN®
Gym Floor Finish

Huntington Laboratories

Huntington Laboratories, Inc.
Huntington, Indiana

Philadelphia 35, Pa. **Toronto 2, Ontario**

THE RECORD REPORTS

WASHINGTON REPORT

(Continued from page 32)

of what the Service has in its files on this subject has come from the experience of other countries. There is not "too much data" at hand, Mr. Hamady says. What is here is freely supplied to those asking for it.

A heavy volume of requests for low-cost housing designs comes into IHS, and technicians are working now on pamphlets which will incorporate "the best design," not only from the United States, but from other countries as well. Information sent out on design for housing is "tested" material in the sense that the Service knows it has worked successfully elsewhere.

Other services include information on foreign work which might be available for American architects and engineers. Many firms specializing in design abroad contact IHS regularly for leads.

The HHFA library, by the way, exchanges with the library in the new National Housing Center of the National Association of Home Builders here, so housing contractors can secure information through their own organization if they wish.

The HHFA constituent agency maintains close contact with world groups whose interests touch on housing. A representative will be at the International Federation of Town Planners meetings in Vienna, July 22–27. Mr. Hamady will visit Milan, Italy, May 4, and Rome on May 8 for the European Productivity Authority meetings on modular coordination. The Russians, the British and the French all are interested in modular measure and how a worldwide application can be achieved, he reports. There is a hope that the program for its development can be placed in EPA or the Economic Commission for Europe to assure firm leadership for its future development. A staff man from the American Standards Association will be the official United States representative to these sessions.

In May (14–17) Mr. Hamady will be in Geneva for the convening of the housing committee of the Economic Commission for Europe.

As far as IHS officials know, this is the only country conducting such a comprehensive housing exchange service with its ramifications reaching through every segment of housing and out to a score or more of foreign nations.

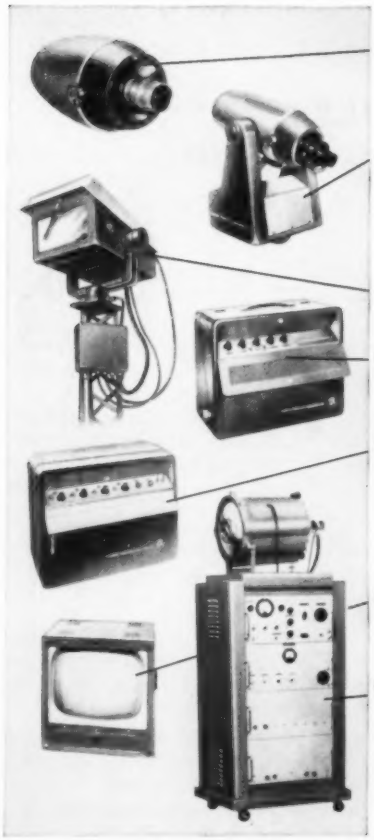
Closed-Circuit TV Applications Broadened by *New Features* of GPL *ii-TV*®

When you specify a closed-circuit television system, make sure it is precision equipment: designed, built and engineered by men who have the highly specialized skills required.

Behind *ii-TV** lies GPL's extensive experience in the production of high-performance TV equipment to meet the rigid quality standards of the Armed Services and broadcasting studios. GPL *ii-TV*'s bright, clear pictures, rugged construction and economy—both of first cost and of maintenance—are assets your clients will appreciate for years to come. For in this field nothing is more economical than the best.

The new equipment which has been added to GPL's *ii-TV* System extends the usefulness of the medium to new areas and makes many existing applications easier. There's *ii-TV* equipment to fit every requirement. And GPL's skilled application engineers will help you custom-fit it to the buildings on your boards.

*The *industrial-institutional TV* system made by General Precision Laboratory.



Basic *ii-TV* Camera—smaller than a football, weighs only 5 lbs. Shaped to fit into tight places. No special lighting needed; sensitive Vidicon tube picks up quality pictures at low light levels. Plugs into any AC wall outlet.

GPL *ii-TV* Camera mounted for remote-control, *indoor* use. Changes in direction—horizontal and vertical—adjustment of lens opening and focus can all be made from remote location. Full 360° camera viewing, 90° tilt.

GPL *ii-TV* Camera for remote-control, *outdoor* use. Weatherproof and explosion proof housings; full 360° camera viewing, 90° tilt.

GPL *ii-TV* Control Unit. 26 lbs. including case. Easily carried by one person. Wall or rack-mounted for permanent installation. Can be located remote from camera.

GPL *ii-TV* Switching Unit. Provides push-button selection for viewing the reports of four cameras, using only one camera control unit. With sequencing equipment, automatic remote surveillance of an entire production line or every step in control of a process is possible.

GPL Monitors or ordinary home TV receivers can be used. Circuit can include any number of receivers. Coaxial lines, easy to install, provide unlimited closed-circuit distribution.

GPL TV Projector. Multiplies the usefulness of a closed-circuit TV system by throwing bright, clear, movie-size pictures on a wall screen. Enables several hundred people to watch together.

For further information and application engineering assistance, write or call. See list at right.

GPL GENERAL PRECISION LABORATORY
INCORPORATED
PLEASANTVILLE, NEW YORK
A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

For detailed information on

GPL *ii-TV*®

contact any of the following

SALES REPRESENTATIVES

- **Technical Instruments, Inc.**
  971 Main Street
  Waltham 54, Mass.
  Tel: Twinbrook 3-1400
  TERRITORY: Massachusetts, Rhode Island, Connecticut, New Hampshire, Maine, Vermont, Northern New York

- **W. A. Brown & Associates, Inc.**
  3610 Mt. Vernon Avenue
  Alexandria, Virginia
  Tel: Overlook 3-6100 3-6333
  TERRITORY: Florida, Georgia, North Carolina, South Carolina, Maryland, Delaware, Alabama, Mississippi, Tennessee, Virginia, West Virginia

- **M. P. Odell Company**
  2536 Euclid Avenue
  Cleveland 15, Ohio
  Tel: Prospect 1-6171
  TERRITORY: Eastern Michigan, Western Pennsylvania, Ohio

- **Hugh Marsland & Company**
  6405 North California Avenue
  Chicago 45, Illinois
  Tel: Ambassador 2-1555 2-1556
  TERRITORY: Western Michigan, Indiana, Illinois, Iowa, Nebraska, North Dakota, South Dakota, Minnesota, Wisconsin, Kansas, Missouri, Kentucky

- **J. Y. Schoonmaker Company**
  2011 Cedar Springs
  Dallas 1, Texas
  Tel: Sterling 3335
  TERRITORY: Texas, Oklahoma, Louisiana, Arkansas

- **Don H. Burcham Co.**
  P. O. Box 4098
  510 N. W. 19th Avenue
  Portland 9, Oregon
  Tel: Capital 7-3830
  TERRITORY: Washington, Oregon, Montana, Idaho

- **Kittleson Company**
  416 No. La Brea Avenue
  Los Angeles 36, California
  Tel: Webster 8-2455
  TERRITORY: California, Nevada, New Mexico, Arizona

- **Canadian Westinghouse Company, Ltd.**
  P. O. Box 510
  Hamilton, Ontario
  Tel: Jackson 8-3461
  TERRITORY: Canada

or

General Precision Laboratory
Incorporated

- **Main Office**
  (including New York District Office)
  63 Bedford Road
  Pleasantville, New York
  Tel: Pleasantville 2-4100

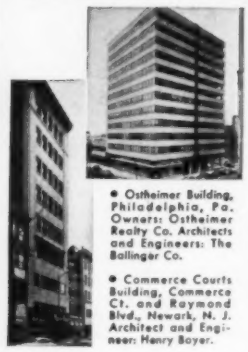
- **Mid-Atlantic District Office**
  The Benson, Suite 111B
  Jenkintown, Pennsylvania
  Tel. Turner 4-3476

- **Mid-Western Office**
  188 West Randolph Street
  Chicago, Illinois
  Tel: Dearborn 2-6453

- **Western Office**
  21 N. Santa Anita Avenue
  Pasadena, California
  Tel: Sycamore 5-5869

"What my clients worry about is Maintenance!"

AIRTEMP INSTALLATIONS



• Ostheimer Building, Philadelphia, Pa. Owners: Ostheimer Realty Co. Architects and Engineers: The Ballinger Co.

• Commerce Courts Building, Commerce Ct. and Raymond Blvd., Newark, N. J. Architect and Engineer: Henry Boyer.

Airtemp AIR CONDITIONING IS CHRYSLER-ENGINEERED TO GIVE TROUBLE-FREE SERVICE

Yes, once the air conditioning installation is made, you and your clients want quiet, *trouble-free* operation from then on—with no complaints! And that's what Airtemp's Chrysler engineering assures. Here you have the pioneers in packaged air conditioning putting all their skill and knowledge into your installation. Here you have the advanced principles of engineering leadership at your command for advice, consultation and application.

Airtemp cuts maintenance to the bone. You receive all the advantages of peak performance at lowest price. We'd like to explain them in detail. Without obligation on your part, write: Airtemp Construction Corporation, Dayton 1, Ohio.

Airtemp CONSTRUCTION CORPORATION

SUBSIDIARY OF CHRYSLER CORP.

THE FORWARD LOOK

IN AIR CONDITIONING • HEATING FOR HOMES, BUSINESS, INDUSTRY

CLIMAX OF MOVIE, "The Tenant at 1010 Main," occurs as Elmer Payne (center) learns 480-v system could cut cost yet provide adequate power in his firm's new building.

NEW General Electric film shows . . .

How to plan "up-to-the-future" power distribution for commercial buildings

"The Tenant at 1010 Main," latest motion picture in G.E.'s non-commercial More Power to America series, has just been released and is now available to you. This film portrays the importance of adequate power distribution systems in today's commercial buildings. It dramatically illustrates the consequences of outdated systems. And most important, it shows how to plan a system capable of accommodating future load growth as well as serving present demands.

CONSULTING ENGINEERS, CONTRACTORS, ARCHITECTS, BUILDING OWNERS can all use this entertaining, informative film which puts across the benefits of adequate power distribution in general, and modern, higher-voltage systems in particular. Though full of factual, engineering information, the film was especially designed to be acceptable to either technical or non-technical audiences. An authoritative manual, companion of the film, completes this MPA program.

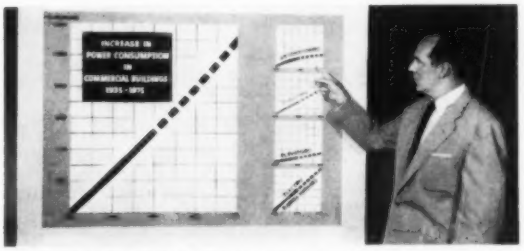
More Power to America was launched in 1945 by General Electric to help America achieve higher productivity and better living standards through efficient application of electric power.

TO OBTAIN THIS FILM, or other MPA programs, contact your utility or nearest G-E Apparatus Sales Office, or mail coupon. MPA programs may be purchased or borrowed. General Electric Co., Schenectady, N. Y.

MORE POWER TO AMERICA

GENERAL ELECTRIC

IMPORTANCE OF POWER DISTRIBUTION was driven home to Elmer earlier when he witnessed tenant vacating "1010 Main" because building's system couldn't serve modern office machines and needs.



REASON FOR TROUBLE at "1010 Main" and Elmer's present quest for a system to economically meet future needs becomes obvious in view of load growth in last 20 years and that expected by 1975.

General Electric Co., Sect. C350-5
Schenectady 5, New York

☐ I am interested in purchase details on
☐ I should like to borrow

. . . . the MPA Commercial Building Power Distribution program.

NAME_____

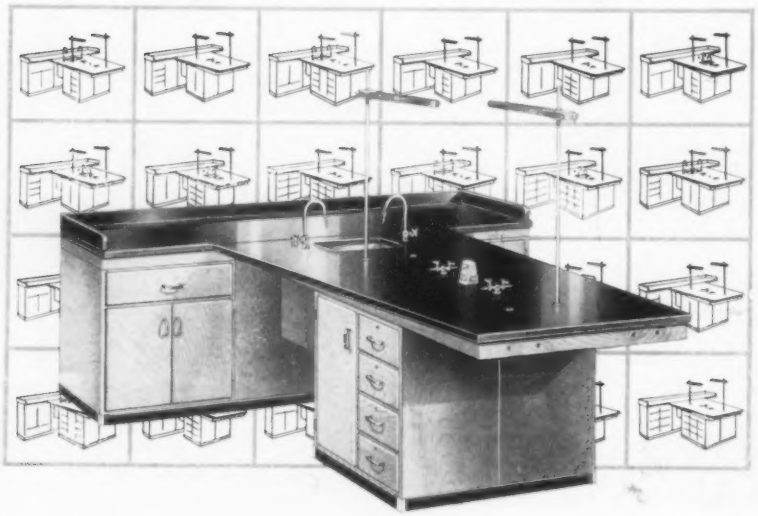
TITLE_____

COMPANY_____

ADDRESS_____

CITY_____ **STATE**_____

Hamilton Activity-Centered science tables
. . . with 90 work-and-storage combinations . . .
solve tomorrow's classroom problems, today!



Before today's freshmen are seniors, classroom requirements will be critical. You can start to meet this problem now with Hamilton Activity-Centered tables, which permit science rooms to be used *every period* of *every day*, for laboratory, academic or home room activities.

These new Hamilton units offer so many advantages—largest available work surface . . . up to 40 locked drawers . . . unique, tapered "traffic-flow" design . . . low-cost roughing-in option . . . Northern Hard Maple construction in 6 distinctive finishes . . . 90 different work-and-storage combinations!

There's a lot more we'd like you to know about Hamilton Activity-Centered science tables—please write today.

Hamilton

LABORATORY EQUIPMENT

HAMILTON MANUFACTURING COMPANY TWO RIVERS, WISCONSIN

THE RECORD REPORTS

REVIEWING THE RECORD

(Continued from page 16B)

Architectural Record, October 1906

Early work of Greene and Greene includes open dining room in the Tichenor house (above), a patio in the Hollister house (below)

Architectural Record, December 1913

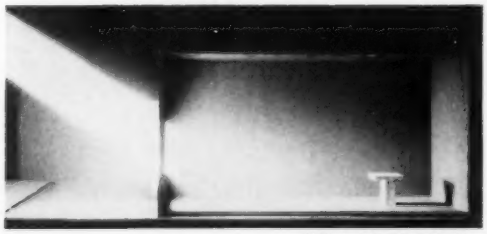
without even nodding at the Missions.

"The California bungalow," he said, "both as a matter of design and as a matter of plan, has about it a certain practical and esthetic tendency. Its whole purpose is to minimize the distinction which exists between being inside and outside four walls. The rooms of such a building should consequently be more spacious, they should not be cut off any more than is necessary one from another, and they should be finished in wood simply designed and stained so as to keep so far as possible its natural texture and hue. The exterior, on the other hand, should not be made to count very strongly in the landscape. It should sink, so far as possible, its architectural individuality and tend to disappear in its natural background. Its color, consequently, no matter whether it is shingled or clapboarded, should be low in key and should correspond to that of the natural wood. Its most prominent architectural member will inevitably be its roof, because it will combine a considerable area with an inconsiderable height, and such a roof must have sharp projections and cast heavy shadows, not only for the practical purpose of shading windows and piazzas, but for the esthetic one of making sharp contrasts in line and

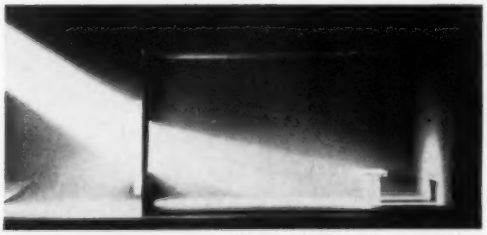
(Continued on page 328)

THERE'S MORE TO *daylight* THAN MEETS THE EYE

"Smoke Box" photo—window glazed with clear glass.



Diffusing glass in smoke box.



Directional diffusing glass in smoke box.

Stop Glare and Heat with Light Diffusing Glass

Like other natural resources daylight needs to be controlled to be of greatest benefit. "Raw" daylight seldom meets specific lighting needs, since it contains a host of unwanted factors that cause discomfort and inefficiency. Obtain the results you want by specifying a glass "visioneered" to meet your requirements.

Good daylighting can be achieved with a handsome, modern, diffusing pattern which disperses softened light deep into interiors, provides comfortable, even illumination without harsh glare and sharp contrasts that cause costly eye fatigue. And if excess heat is a problem, keep interiors more comfortable with Mississippi Coolite, heat absorbing, glare reducing glass, which absorbs up to 50% of solar heat rays.

In your new building or remodeling projects gain all the benefits of natural light without the drawbacks. Control "raw" daylight by specifying Mississippi Glass. Available everywhere in a wide variety of patterns and surface finishes, wired and unwired, all "visioneered" to solve your daylighting problems.

Write today for free catalog No. 56G • Address Department 7.

MISSISSIPPI GLASS COMPANY

88 Angelica St. • St. Louis 7, Mo.

NEW YORK • CHICAGO • FULLERTON, CALIFORNIA

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

announcing a

$10,000 COMPETITION

for the design of a

HOME FOR THE AGED

for

100 residents

SPONSORED BY

THE NATIONAL COMMITTEE ON THE AGING
of the
NATIONAL SOCIAL WELFARE ASSEMBLY
under a grant from the
FREDERICK AND AMELIA SCHIMPER FOUNDATION

in conjunction with the
ARCHITECTURAL RECORD
and
THE MODERN HOSPITAL

AWARDS

First Prize	$5,000.00
Second Prize	$2,500.00
Third Prize	$1,000.00
3 Honorable Mentions *(each)*	$ 500.00

DATES

Competition opens May 10, 1956
Last date for filing entries
August 1, 1956
Competition closes October 1, 1956

APPROVAL

The Program and method of procedure have been approved by the Committee on Architectural Competitions of the American Institute of Architects.

PROFESSIONAL ADVISER

I. S. Loewenberg

CONSULTING ARCHITECT

Edward H. Noakes

JURY OF AWARD

Pietro Belluschi

Richard J. Adams

Ollie A. Randall

Charles F. Wilinsky

William Wilson Wurster

BASIS OF AWARD

1. Plan relationships and economic use of space.
2. Quality of environment.
3. Structural practicability.

PURPOSE OF THE COMPETITION

The purpose of the competition is to stimulate imaginative planning for a type of building rapidly increasing in volume and importance but relatively new to architects, and about which there is practically no reference material in the literature of architecture.

ELIGIBILITY

Open to all architects, architectural students and draftsmen except those regularly employed by the professional adviser or any of the judges. Presentation may be made by individuals or collaborative groups

PUBLICATION

Award winners will be published in ARCHITECTURAL RECORD and THE MODERN HOSPITAL. The award winners and a selected group of designs together with contestant and Jury comments will be published in book form for professional and public use as a reference providing the results warrant it.

NOTE

Contestants must register (using form to right) to receive the program in which the competition details and rules are set forth. This is an announcement only.

ENTRY FORM

Professional Adviser
Home for the Aged Competition
Suite 517
1145 19th Street, N. W.
Washington 6, D. C.

Please send me the program of the Home for the Aged Competition.

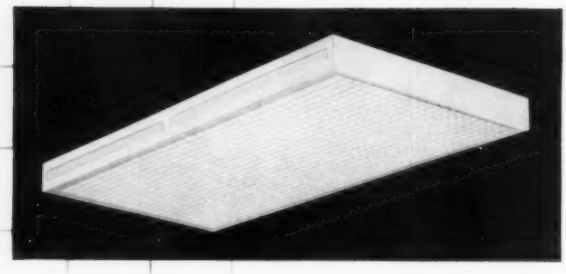
NAME _____
(Please Print)

ADDRESS _____

COLLABORATORS (if any) _____

ONE FIXTURE:

8 sq. feet
of
unobstructed
illumination



NEW
electro silv-a-king
surf-a-lite

Our new Surf-A-Lite achieves a uniform luminosity over its entire 2 ft. x 4 ft. surface—free of visible metal bands and dark islands. The entire fixture presents a smooth appearance with no visible screws or latches when the "Magic Frame" door is closed.

Through the use of various diffusing media the desired comfort ratio can be obtained for any installation. And when used with our exclusive ½" sq. "Poly Cube" polystyrene louver it achieves a glowing, jewel like appearance which you will find adds to the beauty of the most luxurious interior.

SHALLOW 3½" FIXTURE mounts flush to ceiling . . . modular design for unlimited variety of lighting patterns.

Available in two and four lamp units, 12", 17", or 24" wide—4-ft. or 8-ft. long...in ½" sq. "Poly-Cube" polystyrene louver, pattern #70 low brightness lens panel or Alba Glass diffusers with metal or plastic sides.

Complete specification and installation data available upon request.

electro silv-a-king corporation
1535 S. Paulina Street, Chicago 8, Ill.
Spruce and Water Sts., Reading, Pa.

DESIGNERS AND MANUFACTURERS OF THE FINEST IN LIGHTING

THE RECORD REPORTS

REVIEWING THE RECORD

(Continued from page 324)

Architectural Record, October 1914

Detail of roof lines and balcony entrance for house near Los Angeles by architect E. B. Rust (above) and large windows in dining room of the Underhill house (below)

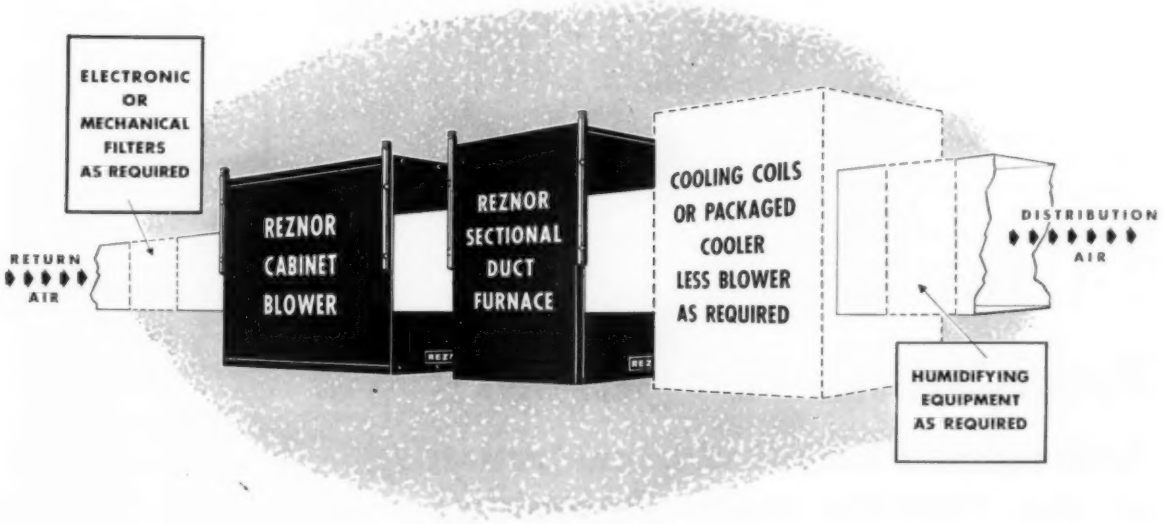
Architectural Record, October 1906

shade to compensate for the moderation of color. Its esthetic character will necessarily be wholly picturesque; and it should be both surrounded by trees and covered, so far as is convenient, with vines."

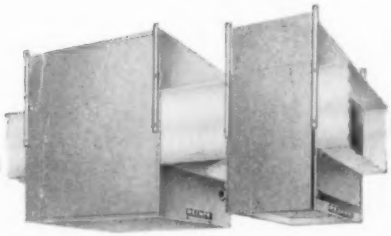
Croly in his 1913 piéce, on the other hand, found the Spanish tradition a promising foundation for a local architecture, although many of his reasons demonstrated how early and how firmly many of the regional characteristics were established in California design. The Spanish adobe houses, Croly wrote approvingly, "were long, low, restful structures with salient but gently sloping tiled roofs, over-hanging eaves, enclosed porches and piazzas. . . . They dispensed with the mere mannerisms of the Mission buildings, and announced their allegiance to the admirable sources from which they were derived by their acceptable proportions, their strong lines and shadows, and their sharp emphasis of those parts of the building which most deserved it." Croly also expressed his great admiration for Western woods and Western uses of them: "Our [the Eastern] wooden houses have been for the most part cursed by the fact that both owner and architect have been ashamed of their chosen materials

(Continued on page 330)

Here's the right start for a *custom-engineered* heating-cooling system


ELECTRONIC OR MECHANICAL FILTERS AS REQUIRED
RETURN AIR
REZNOR CABINET BLOWER
REZNOR SECTIONAL DUCT FURNACE
COOLING COILS OR PACKAGED COOLER LESS BLOWER AS REQUIRED
DISTRIBUTION AIR
HUMIDIFYING EQUIPMENT AS REQUIRED

You complete the picture by specifying additional components to meet *exact* job requirements



- Four sizes—air deliveries range from 1000 to 8000 CFM
- Built-in filter racks
- Removable panels allow easy access to filters and drive
- Standard height on all duct flanges, matches that on furnaces, facilitates duct connections
- Each blower is exact match for one furnace section, as required for heating only
- Larger blower with by-pass duct easy to install where addition of cooling equipment necessitates large air deliveries

- Four sizes—150,000, 200,000, 250,000 and 300,000 BTU
- Sections may be installed side-by-side and in multiple banks to achieve system capacities of more than 2,500,000 BTU
- Maximum section weight of 315 pounds eliminates installation problems on large capacity systems
- Threaded mounting tubes interchangeable for suspended installation or base mounting
- For use with any type of gas

- Interchangeable snap-out plates for vertical or horizontal flue connections
- Built-in draft diverter is reversible so that flue connection may face in either direction
- Controls may be located on end or side as preferred
- Designed for air flow in either direction
- Stainless steel or aluminized steel heat exchanger
- Rugged steel construction . . . grey-green Perlite baked enamel finish

THERE IS NO "EQUIVALENT" FOR REZNOR GAS HEATERS

REZNOR
THE WORLD'S LARGEST-SELLING GAS UNIT **HEATERS**

REZNOR MANUFACTURING CO., 62 Union Street, Mercer, Pa.
Please send me bulletins giving complete specification information on Reznor sectional duct furnaces and cabinet blowers

NAME_____ TITLE_____

COMPANY_____

STREET_____

CITY_____ STATE_____

REVIEWING THE RECORD

(Continued from page 328)

and were trying to make wood as in one way or another a substitute for stone; and it is peculiarly refreshing consequently to find, as we do in California, evidence of a very general desire to use wood in some more idiomatic and appropriate way. The native California red wood is a timber with admirable qualities; and it is fortunate that a group of architects are coming to the front who are prepared to do it justice.

It was agreed by nearly all of the RECORD's writers that the California client deserved as much credit as the California climate for the architectural development of the region.

John Galen Howard, in the October 1916 issue, felt that "One of the best signs of the times is that no one seems to care any longer for the merely pretty thing. The type of beauty which is sought is that in which long suave lines and broad surfaces play the chief part instead of intricate or applied detail." And he added: "A charming and individual client has a right to a charming and individual house, and the architect can produce the result only by going along with his client, instead of imposing some arbitrarily conceived form upon him. In this way unexpected rhythms are struck, which seem to take a house out of the everyday world and make it a part of romance."

Schuyler, much taken with California, enlarged his impressions to an optimistic outlook for the architectural future of the country as a whole: ". . . The comfort betokened," he said of Los Angles houses, "is of that moderate degree to which any American of ordinary education and ordinary aptitudes may reasonably aspire, when it does not imply that anybody has been depressed that a favored few may be exalted, when, in a word, it is a triumph of democracy. . . . And the showing is all the more encouraging as a social symptom when it is a showing how many Americans 'of moderate means' and what a steadily increasing number of such Americans are able in their abodes and their surroundings to give evidence of culture and refinement, to avoid the vulgarity of crudity on the one hand and the vulgarity of ostentation on the other."

For an architect's view of what it was like to be involved in the making of a California tradition, herewith Charles Sumner Greene, whose 1915 remarks were quoted in the RECORD's May 1948 "appreciation" of the Greene brothers:

"Sixteen years is a very brief space of time when one thinks of the building of Rome, but in these sixteen years the growth of California has been phenomenal. Our Rome has not yet been built, but we have covered the ground. Beneath all this haste . . . and sordidness . . . there is wholesome enthusiasm born with the sight of the soil and the sun of this wonderful land. One is forced to believe that in the end it must triumph over the exotic tradition [Mission and Spanish-American] and produce a style of architecture best suited to its own endless possibilities.

"In fact, between the automobile mania and the bungalow bias, there seems to be a psychic affinity. They have developed side by side and they seem to be the expression of the same need and desire, to be free from the commonplace of convention. It is the growth of the germ of California's incentive, the mere joy of living, newly discovered. . . ."

Architects—Engineers

Arrange now for your demonstration of the COUCH Fully-Automatic Audio-Visual Nurse Call System

Dependable performance is the big factor in an automatic nurse call system — the kind of performance offered only by a COUCH system. Call your COUCH representative for a thirty-minute demonstration today.

Send for Bulletin #126. For other hospital signalling equipment, ask for Bulletin #125.

Couch also makes

Private Telephone Systems
(Bulletin #121)

Apartment House Phones
(Bulletin #128)

Fire Alarm Systems
(Bulletin #124)

DATA SHEETS AND BULLETINS AVAILABLE UPON REQUEST.

S. H. Couch Company, Inc.
NORTH QUINCY 71, MASSACHUSETTS

Built-in Dependability

Entrance in the grand manner—to a beautiful home, a superb shop or the office of tomorrow!

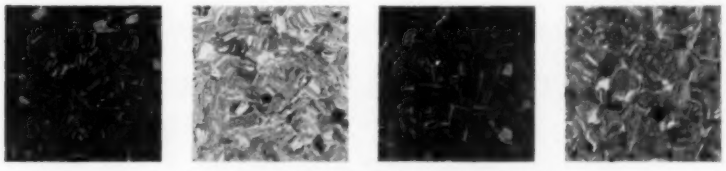
B.F.Goodrich

Agatine

a radically new floor tile that's handsome to look at, quiet under foot and amazingly easy to clean!

"Agatine" answers your every requirement! It has the quiet and comfort of rubber tile. Its non-porous surface resists dirt, nicks and scuffs — stays lustrous with a minimum of waxing. The crisp, modern design actually hides footmarks. Made by an exclusive B. F. Goodrich process, "Agatine" is a *super-dense* compos tion of tiny gems of color that go the full thickness of the tile. Even with the heaviest foot traffic it will outlast the building!

"Agatine" can be installed on or above grade, over wood or concrete — with or without radiant heating. 9″ x 9″ tiles come in 16 colors — .80 gage (for homes and light traffic areas) and ⅛″ (for commerical use).



4 OF THE 16 BEAUTIFUL AGATINE COLORS

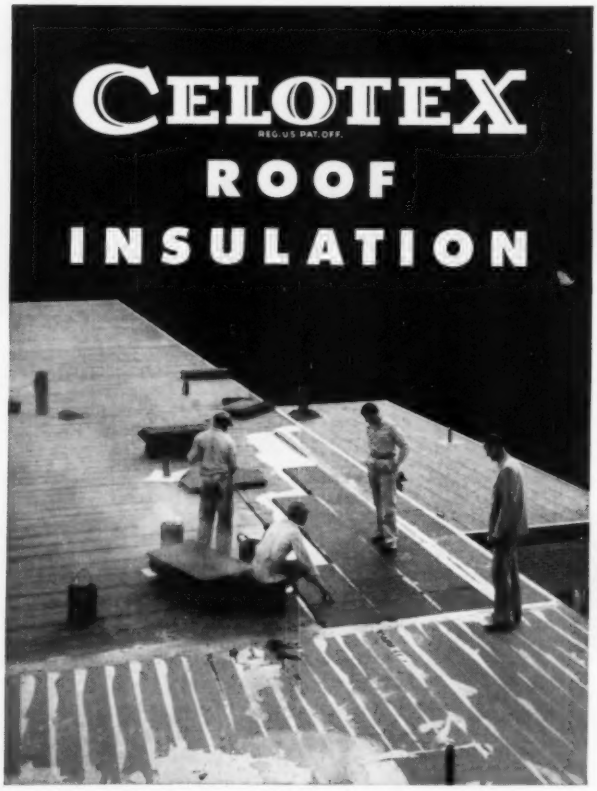
B.F.Goodrich

FOR SPECIFICATIONS:
Write B. F. Goodrich Co., Flooring Division, Dept. AR6
Watertown 72, Mass.

KOROSEAL TILE • RUBBER TILE • ASPHALT TILE • RUBBER COVE BASE • STAIR TREADS • ACCESSORIES

© 1956, The B. F. Goodrich Company

Proved by the test of time...
Preferred for today's roofing needs!



31 YEARS ON THE JOB!
Woodward and Tiernan Printing Co., St. Louis, Missouri. 225,000 square feet of Celotex Roof Insulation applied in 1925 . . . and still doing a job!

SPECIFIED FOR EVINRUDE!
Evinrude Motors Building, Milwaukee, Wisconsin. 300,416 square feet of Celotex 1" Preseal Roof Insulation used. Roofing Contractor: F. J. A. Christiansen Roofing Co., Inc., 2139 West Purdue Street, Milwaukee, Wisconsin.

Only CELOTEX Roof Insulation provides all of these important features:

Made from tough cane fibers. The only roof insulation made from genuine Louisiana cane fibers . . . long, tough, durable.

Resists damage from rough handling. Tough cane fiber board clear through . . . no weak spots to tear or break in shipping and application.

Controlled density and thickness. Quality control insures exact, even density . . . providing uniform insulation over the roof deck.

Strong, rigid, crush-resistant. Withstands wheeling and job traffic; resistant to punctures or depressions forming weak spots.

Excellent bond—no excess take-up of bitumen. Compactness of surface means insulation value is not materially affected by moppings on the job.

Moisture-resistant. Special chemical treatment renders board moisture-resistant throughout. Preseal and Channel-Seal are asphalt coated.

Firm, squared edges—snug joints. Provide flush contact at board joints for top insulation efficiency, protection from punctures.

Termite and dry rot resistant. Protected against dry rot and termite attack by exclusive Ferox® Process.

OVER A THIRD OF A CENTURY OF LEADERSHIP IN EFFICIENCY, DURABILITY, ECONOMY!

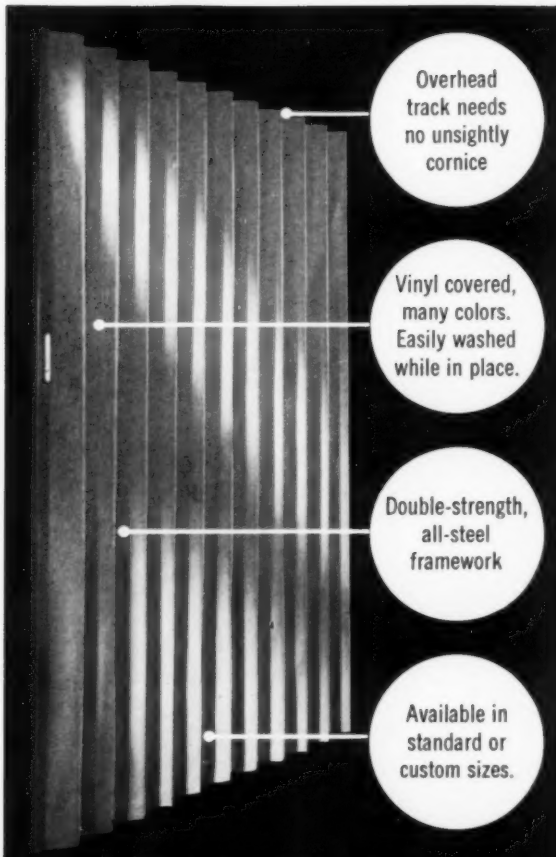
In the past 35 years, The Celotex Corporation has manufactured and sold many millions of square feet of roof insulation. The advantages of specifying Celotex Roof Insulation become more and more obvious as the years go by . . . for this dependable insulation has proved able to stand up to time, wear, and weather, decade after decade. *Be sure* always to specify *job-proved* Celotex Roof Insulation.

It pays to specify genuine

CELOTEX
REG. U.S. PAT. OFF.
ROOF INSULATION

THE CELOTEX CORPORATION, 120 SOUTH LA SALLE STREET, CHICAGO 3, ILLINOIS

are folding doors faddish...or functional?


Overhead track needs no unsightly cornice
Vinyl covered, many colors. Easily washed while in place.
Double-strength, all-steel framework
Available in standard or custom sizes.

Superior construction features account for MODERNFOLD'S leadership. More MODERNFOLDS are in use than any other make of folding door!

what's behind the growing popularity of MODERNFOLD DOORS?

Ask any of your friends in the profession why *he* has used MODERNFOLD Doors. Was it to save space? Was it as a room divider? Or did he devise some completely *new* application for this door?

In recent years, architects have seen how MODERNFOLD allows them greater freedom of design by eliminating door-swing. They have witnessed the long service life of this door. And they are employing them in commercial, residential and institutional designs. How can MODERNFOLD Doors best serve *you?* When your MODERNFOLD distributor shows you their many quality features, your imagination will be stimulated to find new applications for them.

modernfold doors have no equal

MODERNFOLD distributors are listed under "Doors" in city classified telephone directories

modernfold® DOORS

© 1956, NEW CASTLE PRODUCTS, INC.

NEW CASTLE PRODUCTS, INC., New Castle, Indiana • *In Canada:* New Castle Products, Ltd., Montreal 6 • *In Germany:* New Castle Products, GMBH, Stuttgart

New Castle Products, Inc., Dept. E30, New Castle, Indiana

Please send me full information on MODERNFOLD Doors.

NAME_____

BUSINESS ADDRESS_____

CITY_____ ZONE____ STATE_____

THE RECORD REPORTS:

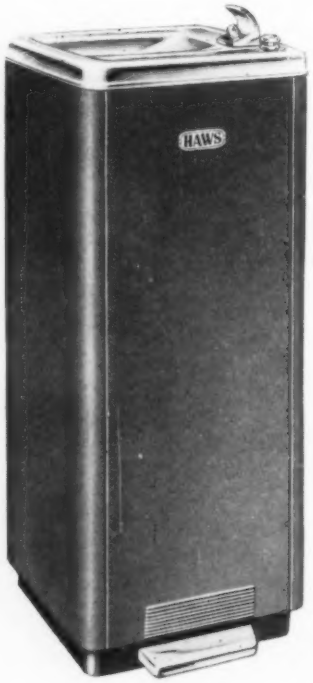
(Continued from page 28)

SILVER MEDAL in design and craftsmanship: mosaic panel by Max Spivak for Cerebral Palsy School; Michael Radoslovich, architect

HONORABLE MENTION in design and craftsmanship: thermostat by Henry Dreyfuss for Minneapolis-Honeywell Register Co.

distinctive...
reliable...
HAWS ELECTRIC WATER COOLERS!

Add beauty and convenience to your interior plan! Specify HAWS Coolers—designed in smooth, functional lines that complement today's architecture—with custom-styled cabinets, lifetime stainless steel tops, chrome trim. They are ideal for school, office, restaurant or cafeteria, commercial, industrial and institutional application.



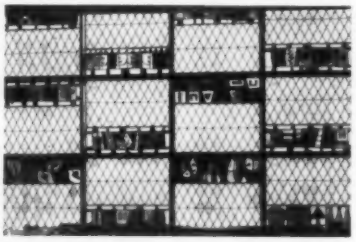
No complex planning is necessary! HAWS Electric Water Coolers merely require an electric outlet, water source and drain. There are many models for many needs...bubbler faucets, bottle cooler types, fill-glass faucets...all with HAWS complete sanitation features.

HAWS also features complete lines of drinking fountains and Emergency Eye-Wash Fountains...also **KRAMER Flush Valves** for every make plumbing fixture that requires an automatic closing valve.

For full information and specifications, see the HAWS Catalog. Write today!

HAWS DRINKING FAUCET CO.
1443 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA

HONORABLE MENTION in design and craftsmanship: stained glass by Henry Lee Willet Studios for St. John's Lutheran Church, La Grange, Ill.; Whitehead & Billman & Associates, architects



HONORABLE MENTION in design and craftsmanship: stained glass for Milton Steinberg House, New York, by Adolph Gottlieb; Kelly & Gruzen and S. Robert Greenstein, architects

Washrooms in Soldiers Memorial finished in Carrara® Glass!

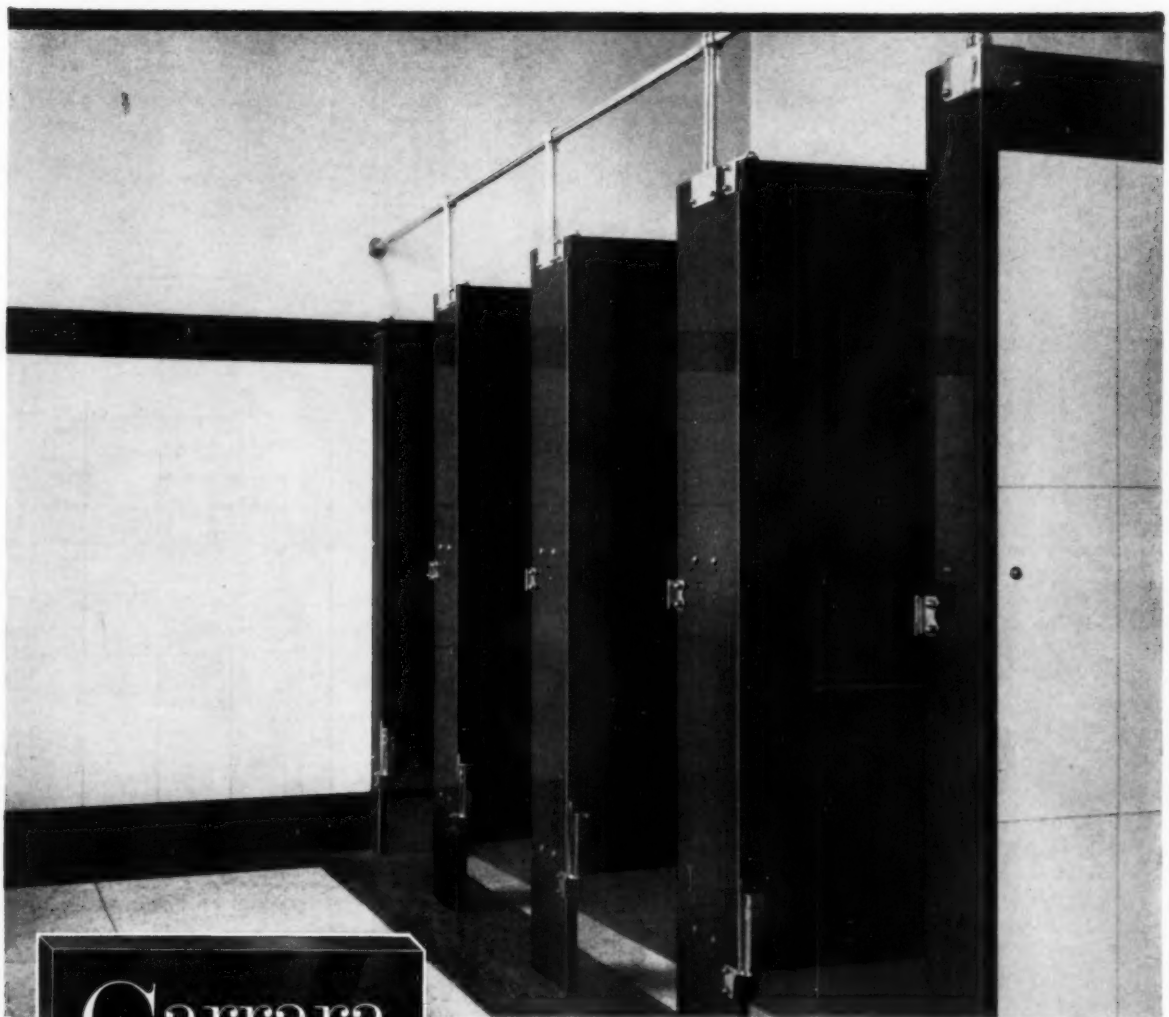
● There are three important reasons why Carrara Structural Glass is the ideal material to create washroom walls and partitions in public buildings.

BEAUTY. The gleaming, highly polished finish of Carrara and its wide range of colors make its selection important where beauty and attractive color schemes are desired.

DURABILITY. Because it is all pure glass, Carrara is designed to last. It won't crack, craze, stain or change color with age. Its uniform homogeneous structure is completely unaffected by water, acids, cleaning compounds, pencil marks or odors.

EASY MAINTENANCE. An occasional wiping with a damp cloth keeps Carrara fresh and clean. And because Carrara is made in large sections and installed with true, even joints, there are few places to trap dust and germs, and add to cleaning problems.

The Soldiers Memorial, in St. Louis, Missouri, was designed by Mauran Russell Crowell & Mullgardt. P. J. Bradshaw, associate. Plaza Commission Architects, St. Louis, Missouri.



Carrara
...the quality structural glass

For more information on Carrara Glass, just write to Pittsburgh Plate Glass Company, Room 6186, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

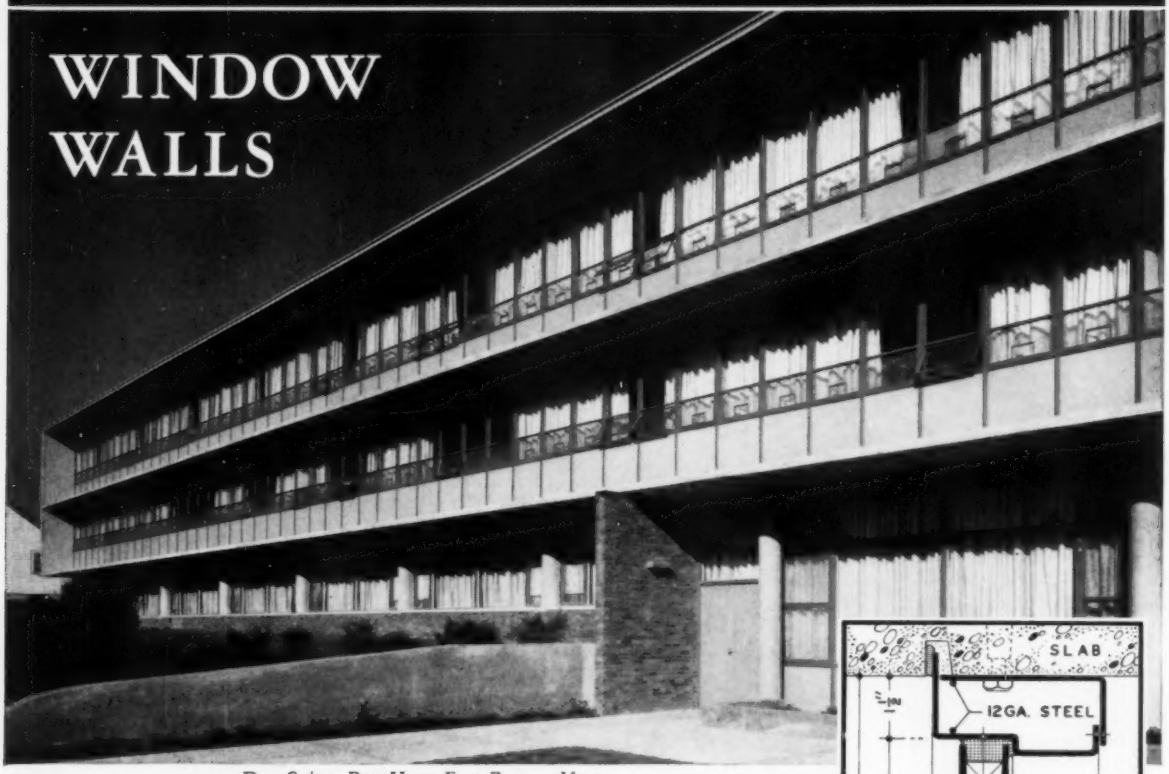
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

Since **HOPE'S** *1818*

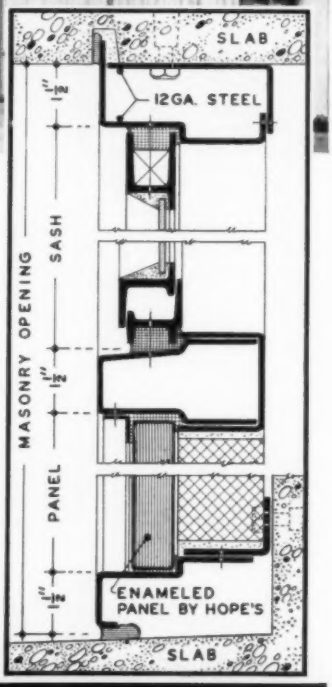
STEEL WINDOWS HAVE THE STRENGTH AND RIGIDITY THAT NO OTHER WINDOW CAN MATCH

WINDOW WALLS



Don Orione Rest Home East Boston, Mass.

Coletti Bros. Architects — *Mozzicato Construction Co., Contractor*



Over the years, as architects have incorporated more and larger glass areas in their designs, Hope's engineers have assisted by pioneering Steel Window Walls of outstanding strength, rigidity and durability. They adapt to any architectural plan, they can accommodate any desired ventilator arrangement and they complement the facade. At right are Hope's construction details used in this modern rest home.

Here's a Partial List of Hope's Steel Window Wall Installations:

1947 — Science and Pharmacy Bldgs., Drake University, Des Moines, Ia. Saarinen, Swanson and Saarinen, Arch'ts, Brooks-Borg, Associates . . . *1950* — Senior High School, East Providence, R. I. Charles A. Maguire and Associates, Arch'ts . . . *1951* — John Thompson Dorrance Lab., M. I. T. Cambridge, Mass. Anderson and Beckwith, Arch'ts . . . *1952* — Douglass Elementary School, Kansas City, Mo. Kivett and Myers, Arch'ts; Angus McCallum, Associate . . . *1953* — Elementary School, 42nd St. & Proctor Ave., Waco, Tex. Walter A. Cocke, Jr. & Co., Arch'ts . . . *1954* — Senior High School, Anaconda, Mont., Fox and Ballas, Arch'ts and Eng'rs.

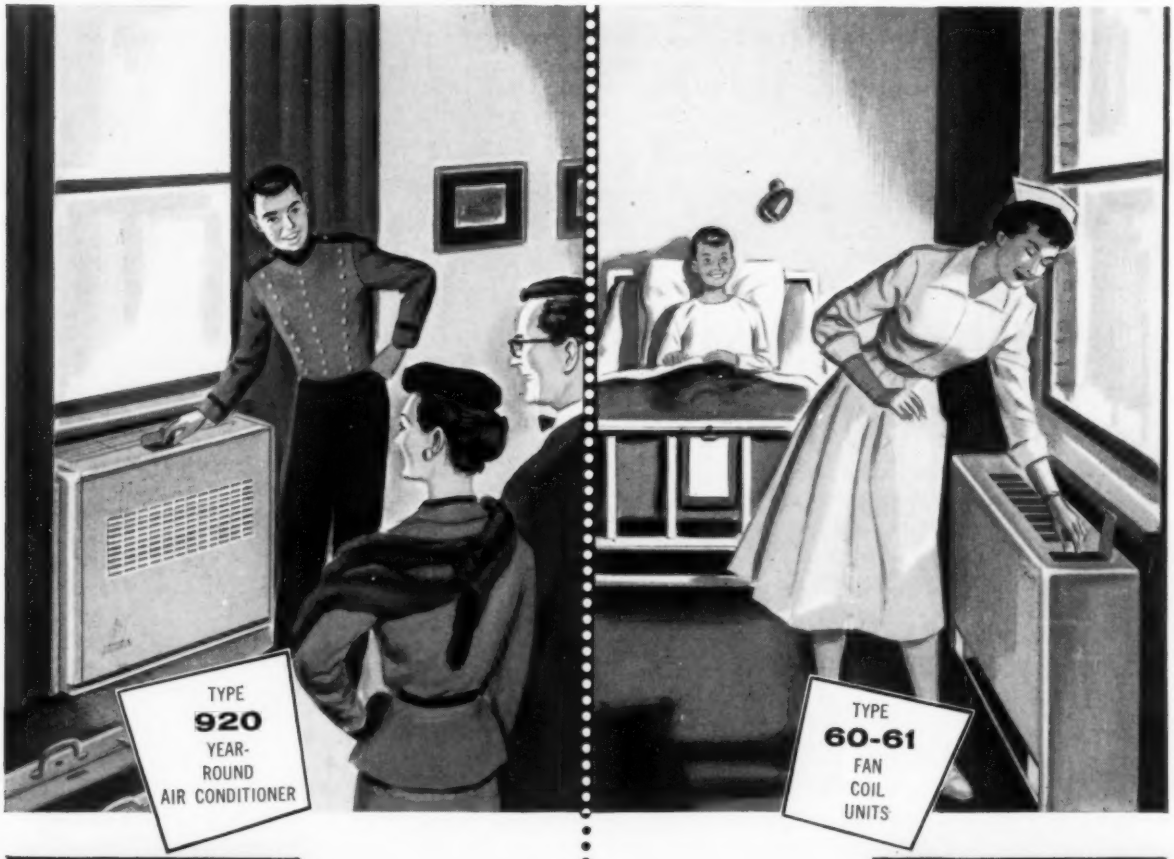
Write for Catalog 134-PA.

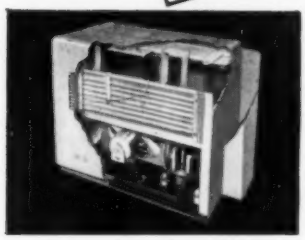
HOPE'S WINDOWS, INC., *Jamestown, N. Y.*

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS

Now—your choice

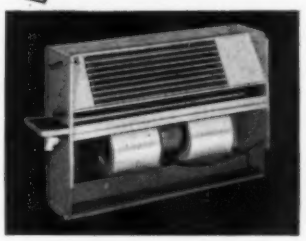
for year-round air conditioning of commercial and institutional buildings—from **MUELLER CLIMATROL**





For
self-contained cooling . . . central steam or water heating

For
central cooling and hot water heating systems



Recessed Air Conditioner. Individual room control saves fuel and power costs — unit works only when needed. You can offer heating *and* cooling for about half the cost of a complete central system. Can be installed room-at-a-time on budgeted program, without disturbing tenants. Efficient one-hp refrigeration cycle uses no water.

Fan Coil Units. Both recessed and cabinet types, in the most complete range of floor-mounted sizes — 200, 300, 400 and 600 cfm. Twin blowers draw room air through permanent filter (standard), blend it with fresh outside air if desired, force it over coil that circulates hot or chilled water. Four-row coil gives better dehumidification.

With this pair of outstanding units, you've an inside track in your bids for multi-room heating and cooling installations. *For new buildings,* both design and performance stand out as the ultimate in modern comfort concepts.

As replacements, their economy and ease of installation add convincing weight to the magic appeal of all-year air conditioning. For closer study of facts, specifications and installation data write for literature.

Mueller Climatrol
Department 56
2038 W. OKLAHOMA AVE. • MILWAUKEE 15, WIS.

THE RECORD REPORTS

(Continued from page 330)

ON THE CALENDAR

May

4 Annual Conference for Engineers, sponsored by the College of Engineering — Ohio Union, Ohio State University, Columbus

5 Annual meeting, Indiana Society of Architects — Marott Hotel, Indianapolis

7–9 Annual meeting, American Institute of Planners — Hotel Sheraton-Biltmore, Providence, R. I.

7–9 Annual meeting, Air Conditioning and Refrigeration Institute — The Homestead, Hot Springs, Ark.

7–11 Annual spring meeting and fourth annual welding show, American Welding Society — Hotel Statler, and Memorial Auditorium, Buffalo

7–11 Convention and Exposition, National Restaurant Association — Navy Pier, Chicago

11–12 The 76th Annual Convention, Michigan Engineering Society — Pantlind Hotel, Grand Rapids

12 Pre-Convention meeting of the Board of Directors, American Institute of Architects — Hotel Biltmore, Los Angeles

12–20 "Showcase for Better Living"; 1956 Home Building Exposition — The Coliseum, New York City

11 The 35th Annual Spring Meeting, Producers' Council, Inc. — Hotel Biltmore, Los Angeles

14–17 Conference of American Society of Mechanical Engineers (to coincide with First Design Engineering Show) — Convention Hall, Philadelphia

15–16 Industrial Nuclear Technology Conference, sponsored by Armour Research Foundation of Illinois Institute of Technology as a feature of its 20th anniversary observance — Museum of Science and Industry, Chicago

15–18 The 88th Annual Convention, The American Institute of Architects — Hotel Biltmore, Los Angeles

15–18 Annual meeting, Heating, Piping and Air Conditioning Contractors National Association (the Mechanical Contractors Association of America) — The Kentucky Hotel, Louisville

16–18 Second Annual Convention, Prestressed Concrete Institute — Hollywood Beach Hotel, Hollywood, Fla.

21–22 Fifth Annual Meeting, Building Research Institute — Sheraton-Brock Hotel, Niagara Falls, Ont.

21–24 Annual meeting, Air Pollution Control Association — Statler Hotel, Buffalo

23–26 Annual meeting, National Society of Professional Engineers — Ambassador Hotel, Atlantic City

24–25 Technical Conference, National Warm Air Heating and Air Conditioning Association — Edgewater Beach Hotel, Chicago

28ff Conference on School Building Design, sponsored by Teachers College; until June 1 — Columbia University, New York City

30ff The 1956 British Architects' Conference; until June 2 — Norwich, England

(Continued on page 342)

YOU MAKE NO MISTAKE WHEN YOU CHOOSE

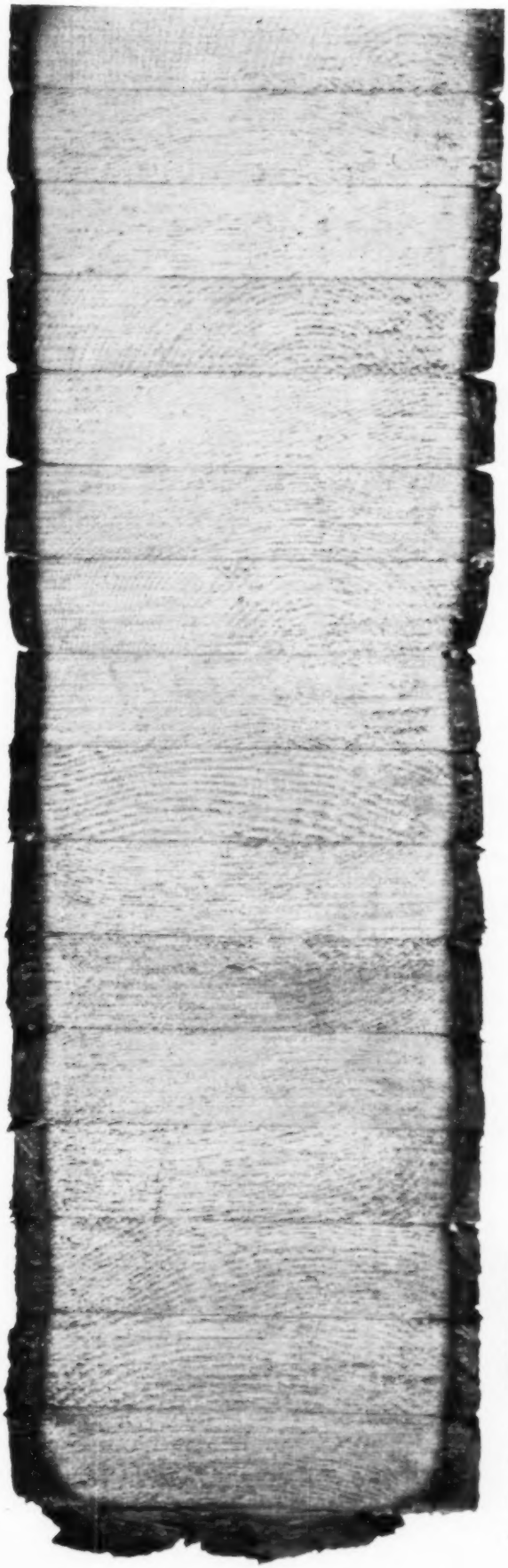
Michaels

as your source of supply for architectural metal building products

Bank Screens and Partitions
Welded Doors
Store Fronts (special)
Building Skins
Spandrels
Louvers
Windows (special)
Revolving Doors
Stair Railings
Church Work (special)
Candelabras
Name Plates
Letters
Check Desks
Lamp Standards
Marquees
Tablets and Signs
MI-CO Parking Meters
Museum Trophy Cases
Bronze Inurnment Urns
Bronze Vases
Misc. Metal Work

Architects, engineers and builders know that when they place a job with Michaels, every component will be fabricated to exact specifications; the materials will be at the location when needed, and the quality and workmanship will be the finest obtainable anywhere. So highly are Michaels products regarded, they have become an important part of some of the nation's most outstanding structures. ¶ Send us a set of specs for your next project—large or small. You'll find Michaels a thoroughly reliable source of supply for everything you need in stainless steel, aluminum or bronze.

THE MICHAELS ART BRONZE COMPANY, INC.
P. O. BOX 668-R, COVINGTON, KENTUCKY
One of the nation's largest fabricators of architectural metal building products



PORTRAIT OF A

Fire-Resistive Structural Material

Through generations of fire history, heavy timber or "mill-type" construction has proved the ability of heavy timbers to resist destruction by fire more effectively than other unprotected structural materials. A recent test shows why:

The glulam timber shown at the left was exposed to direct flame for one hour at an average temperature of 1200 degrees. The section at the beginning of the test measured 9" x 27¼"; at the end of the hour, sound, uncharred area of 7¼" x 26" remained. Thus, with 77% of its original section undamaged, the timber was capable of continuing in service with a safety margin of greater than 2 to 1.

The ability to resist destruction by fire is one reason why heavy structural timbers by Timber Structures, Inc. provide the practical approach to buildings of permanence, economy and beauty. Other advantages, together with outstanding examples of engineered timber construction and a wealth of preliminary design information, are shown in booklet, "Modern Construction." Get your copy from your nearest Timber Structures representative, or fill-in and mail the coupon below.

TIMBER
WARD MAYER
STRUCTURES
INCORPORATED

P. O. BOX 3782-A, PORTLAND 8, OREGON

Offices in Ramsey, New Jersey; Rochester, New York; Boston; West Hartford; Columbus; Charlotte; Chicago; Centerline, Michigan; Kansas City; Kirkwood, Missouri; Wichita; Minneapolis; Des Moines; Memphis; Dallas; Houston; Birmingham; Seattle; Spokane; Denver.

TIMBER STRUCTURES, INC. OF CALIFORNIA
Richmond • Beverly Hills • Sacramento
Local Representatives throughout the United States and Canada

---

TIMBER STRUCTURES, INC.
P. O. Box 3782-A, Portland 8, Oregon

Please send a copy of your booklet, "Modern Construction" to

Name _____

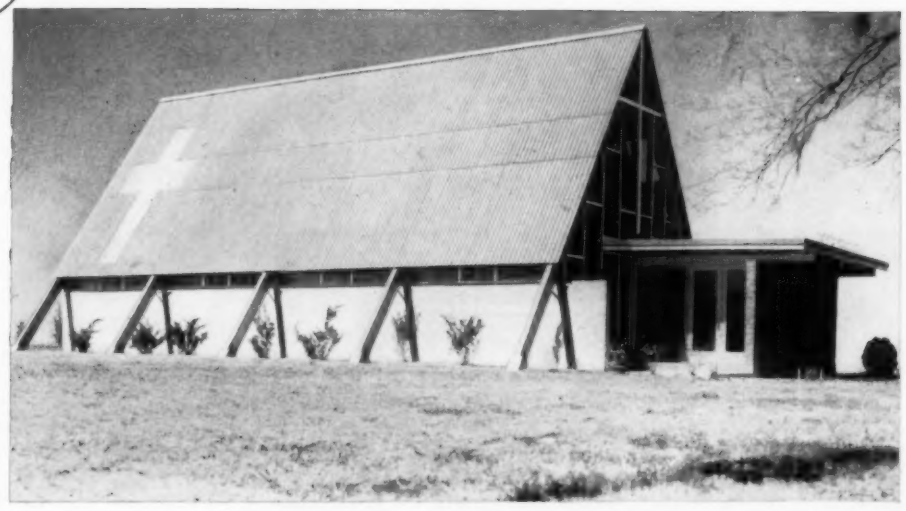
Address _____ Zone _____

City _____ State _____

NEW PRODUCTS BRIEFS
Here's all you do: First
Now you may spray on three different colors of wall paint at one time through the same spray gun, says the Glidden Co. The company has developed Glid-Tex colors to remain separated during the spraying process, thus producing a speckled finish. Colors available are white,
UNUSUAL COATING PRODUCT
Speckled Paint
Multi-Color Paint
VARI-COLOURED
permits many colou
Paint Announced
New Products
Biggest paint news in 10 years . . .
GLID-TEX!
NOW YOU CAN SPRAY 3 COLORS AT ONE TIME . . . GET UNUSUAL EFFECTS
See free offer below—only actual color chips can show you the beauty of Glid-Tex
Here's news about a decorating achievement that produces unusual color effects too beautiful to describe! In just one spraying, new Glid-Tex creates a vari-colored, textured wall pattern over any solid-color latex or oil base paint. No masking required! No bothersome cleaning of equipment between coats because the three Glid-Tex colors go on in just one application! It's a fast short cut to beautiful rooms at an economical cost—truly an achievement that all contractors and decorators will want to see!
FREE! Only actual color chips can convey the true beauty of Glid-Tex. Write for your copy of the new Glid-Tex folder which also includes specifications and instructions.
By the makers of Spred Satin
Glidden
Professional Finishes
The Glidden Company
Maintenance Finishes Division
Dept. AR-556, 11001 Madison Ave.
Cleveland 2, Ohio
Glidden
QUALITY PRODUCTS

ONE OF A SERIES OF IDEAS FOR YOUR FILES

ANOTHER NEW IDEA...



WITH CORRUGATED ASBESTONE

Architect: M. Wayne Stoffle, New Orleans; *General Contractor:* John W. Waters, New Orleans; *Gold Bond Applicator:* Taylor Seidenbach, Inc., New Orleans, La.

Gold Bond Corrugated Asbestone roof— in harmony with the modern design of a suburban church

A small church budget built this modern Faith Lutheran Church in Harahan, Louisiana . . . and yet maintained all-important dignity and warmth of community worship. The use of Gold Bond CORRUGATED ASBESTONE for an unusual roof saved $2000 in construction costs and kept the total amount within their budget.

The distinctive texture of CORRUGATED ASBESTONE Standard "400" gives the church exterior attractive lights and shadows. A cross of translucent corrugated plastic, set into the roof, floods soft light across the altar and blends into the overall church design. Gold Bond CORRUGATED ASBESTONE is practical, too. The rock-like material is fireproof and never needs maintenance. Weather and corrosion will have no adverse effects on looks or performance.

How many uses can *you* think of for Gold Bond CORRUGATED ASBESTONE? Whether it's in remodeling or new construction, commercial or industrial, ASBESTONE creates striking good looks and permanence —means added protection and lower maintenance. Write for full details on this versatile, good looking material. Address Dept. AR-56, National Gypsum Company, P. O. Box 5257-B, New Orleans 15, La. National Gypsum Company, Buffalo 2, New York.

Gold Bond Technical Bulletin No. 2032 and Booklet No. 2273 give full specifications and uses of Gold Bond CORRUGATED ASBESTONE Products.

Gold Bond®
BUILDING PRODUCTS
NATIONAL GYPSUM COMPANY

THE RECORD REPORTS

(Continued from page 338)

June

3–6 Summer annual meeting, American Society of Refrigerating Engineers — Cincinnati

4–7 Annual convention, Edison Electric Institute — Atlantic City

4–8 The 60th annual meeting, National Fire Protection Association — Hotel Statler, Boston

4–8 Knoxville convention, American Society of Civil Engineers — University of Tennessee, Knoxville

6–8 Second Annual Meeting, American Nuclear Society — Palmer House, Chicago

6–10 The 49th Annual Assembly, Royal Architectural Institute of Canada — Banff Springs Hotel, Banff

7–8 Annual convention, Minnesota Society of Architects — Hotel Nicollet, Minneapolis

11–15 Seventh National Plastics Exposition, sponsored by the Society of the Plastics Industry, Inc. — Coliseum, New York City

17–21 Semi-annual meeting, American Society of Mechanical Engineers — Hotel Statler, Cleveland

17–22 Annual meeting, American Society for Testing Materials, and 12th Exhibit of Testing and Scientific Apparatus and Laboratory Supplies — Atlantic City

17–23 Annual convention, American Library Association — Fontainebleau Hotel, Miami Beach, Fla.

17–30 Third Annual Material Handling Training Conference — Lake Placid. Details from: Director, Material Handling Training Conference, 56 Robbins Road, Lexington 73, Mass.

18–20 Semi-annual Meeting, American Society of Heating and Air Conditioning Engineers — Shoreham Hotel, Washington

18–29 International Home Furnishings Market — The Merchandise Mart, Chicago

18ff Fourth Annual School Plant Planning Workshop, sponsored by the Department of Architecture and Architectural Engineering, under the auspices of the College of Education; until July 20 — University of Colorado, Boulder, Colo.

23ff Sixth International Design Conference; until July 1 — Aspen, Colo.

25–27 Annual meeting, American Society of Landscape Architects — Cleveland Hotel, Cleveland, Ohio

25–29 Summer and Pacific General Meeting, American Institute of Electrical Engineers — San Francisco, Cal.

25–29 Annual meeting, American Society for Engineering Education — Iowa State College, Ames, Iowa

27 Porcelain Enamel on Aluminum Conference, sponsored by the Porcelain Enamel Institute, Inc. — Hotel Cleveland, Cleveland

27–29 Annual meeting, Stained Glass Association of America — Copley Plaza Hotel, Boston

July

1–6 The 94th annual meeting, National Education Association — Civic Auditorium, Portland, Ore.

9–11 Health for the Aging — Medical and Social Services; Ninth Conference on Aging sponsored by

(Continued on page 346)

WADE

HAS SOLVED THE *carrier·fitting* DIMENSIONAL PROBLEM.

Exactly how much space do you need in order to install wall-hung closets?

Perhaps the most annoying problem encountered in specifying off-the-floor installations has been the inadequate information available as to the exact space required.

Wade's new carrier-fitting selection manual contains scale drawings of every typical installation, showing minimum possible and recommended pipe space requirements.

You can solve your dimension problems by writing Dept. C., Wade Mfg. Co., Elgin, Illinois for your copy.

WADE carrier·fittings

WADE MANUFACTURING CO.
ELGIN, ILLINOIS

distinctive!

Homes look richer when interiors are decorated with styrene wall tile in Granite Tone colors!

Entirely new concepts in building and construction are forecast for plastics in the near future as the result of current research in many areas. Out of this exploratory work may well evolve a broadened functional use of plastics for exterior and interior walls, and even entire housing units.

Meanwhile, exciting new decorating effects are now possible through recent coloring developments in plastic wall tile. Dramatic depth of color and texture, for example, is added to all the well-known advantages of plastic wall tile through these new color tones which are being featured by leading manufacturers of plastic tile in their new lines.

Granite Tone Colors. Plastic wall tile in new coloring effects developed by Monsanto color research has a depth of tone and richness desired by homeowners. Tiles molded in these new "Granite Tone" colors have the textured beauty of polished granite to create handsome, luxurious bathrooms and kitchens. The development of these "Granite Tone" colors was pioneered by Monsanto, a major supplier of styrene plastic from which guaranteed-quality tile is molded.

Coming soon! Another new Monsanto styling project promises to further extend the decorating uses of plastic wall tile. The design possibilities of tiles molded in unusual shapes—triangles, trapezoids and curved forms—are being explored, and forecast a wider use of plastic tile.

Plastics in construction—Because of the increasing interest in plastics as basic materials in construction, Monsanto has formed a Structural Plastics Engineering Group to study the functional uses of plastic materials. Architects and builders are invited to write for counsel on technical aspects of plastics for building and construction.

A NEW REPORT, "Plastics in Housing," has recently been published by the Department of Architecture of The Massachusetts Institute of Technology. The M. I. T. study was made possible by a Monsanto grant-in-aid. Copies are available at $2.00 each. Address Monsanto Chemical Company, Plastics Division, Room 235, Springfield 2, Mass.

MONSANTO

for dependability, accuracy, quality...

specify *St. Charles*

HOSPITAL CASEWORK

Gratiot Community Hospital, Alma, Mich.; Clark R. Ackley, Architect.

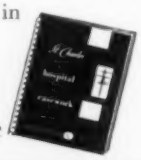
Central sterile supply room.

Nurses' station; Arthur B. Allaben, Administrator, shown at right.

Wardrobe in a patient's room.

From coast to coast, more and more hospitals every day are being equipped with St. Charles casework. Like the beautiful new Gratiot Community Hospital, pictured here, these hospitals and their architects looked to St. Charles for quality, durability and economy in casework.

At St. Charles, highly skilled personnel, employing their 20-year backlog of experience in the nation's newest and most modern casework construction plant, are prepared to be of assistance to you in casework layout and design. Your inquiry will be answered promptly.

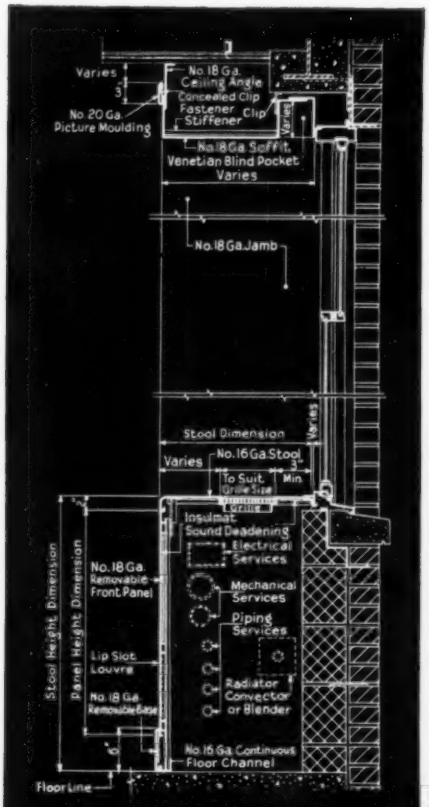


A request on your letterhead will bring our 40-page catalog, "St. Charles Hospital Casework."

St. Charles

casework • sinks and counters • special purpose units

ST. CHARLES MANUFACTURING COMPANY, DEPT. AR, ST. CHARLES, ILLINOIS



architects & engineers
Voorhees Walker Smith & Smith
New York, N. Y.
(Successors to
Voorhees Walker Foley & Smith)

general contractors
Starrett Brothers and Eken, Inc.
New York, N. Y.

Milcor Combination Wall Units solve design problem in Westinghouse Research Laboratory

Functional floor-to-ceiling wainscot is complete answer to complex requirements

Wainscoting for the Westinghouse Research Laboratory in Pittsburgh presented several design problems:

1. It had to provide access to electrical and gas connections behind the wainscoting.

2. It had to include removable partition caps, to provide for future partition locations.

3. It had to have removable front panels, for easy maintenance of heating and air conditioning units.

The Milcor Wall Units shown below provided the answer.

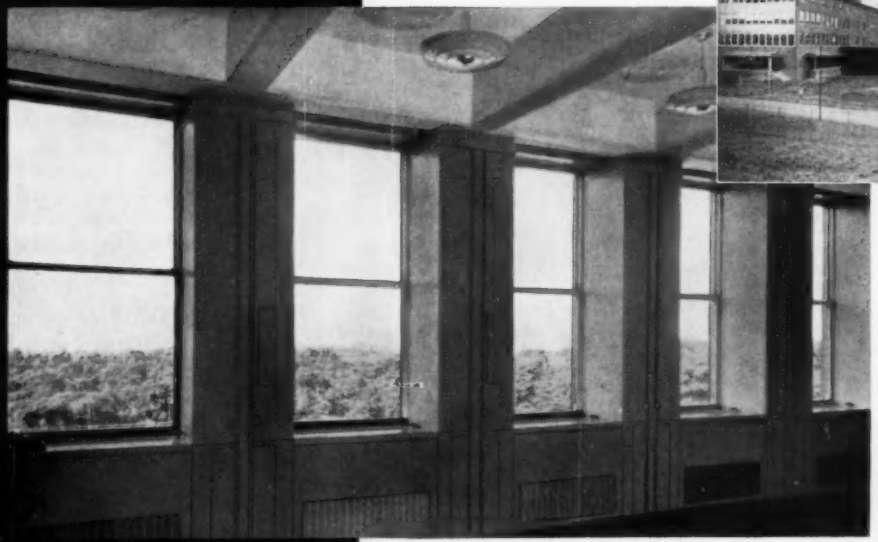
This is a good example of combining window trim and convector enclosures into complete wall units that satisfy individual job situations — at substantial savings in cost.

You can specify Milcor Wall Units in variable dimensions — in either Ti-Co galvanized or regular steel — factory-welded or knocked-down for assembly on the job. One of the Milcor field engineers can help you put Milcor know-how to work on your next job.

For further information, refer to the Milcor pages in Sweet's (Section 12a/InL). Or write for Catalog 102.

MILCOR® Wall Units

Exterior of Westinghouse Research Laboratory, Pittsburgh, Pa.



Close-up of the Milcor Wall Unit installation at Westinghouse Research Laboratory. All units are reinforced and supported by concealed members.

An enamel finish harmonizing with the general interior decorative scheme was baked on at the factory.

INLAND STEEL PRODUCTS COMPANY

DEPT. E, 4033 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN

BALTIMORE • BUFFALO • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT
KANSAS CITY • LOS ANGELES • MILWAUKEE • MINNEAPOLIS • NEW YORK • ST. LOUIS

T-105

THE RECORD REPORTS

(Continued from page 342)

the University of Michigan — Ann Arbor, Mich.

16–18 Food Service Institute, sponsored by *College and University Business* in cooperation with Northwestern University and the University of Chicago — Knickerbocker Hotel, Chicago

22–28 The 23rd International Congress for Housing and Town Planning; theme, "The City and Its Surroundings" — Vienna, Austria. Information: Headquarters, International Federation for Housing and Town Planning, Laan Copes Van Cattenburch 123, The Hague, Netherlands

OFFICE NOTES

Offices Opened

• Cochran, Stephenson & Wing is a new partnership formed for the general practice of architecture by Alexander S. Cochran, James H. Stephenson and Edward Yee Wing. Offices are located at 925 N. Charles St., Baltimore 1, Md.

• Clifford E. Gibbs, Architect, has announced the opening of an office at 7322 Porter Rd., Grand Blanc, Mich.

• Edgar B. Hurt and Clyde F. Trudell announce their association in the firm of Hurt & Trudell, Architects, at 709 Mission St., San Francisco 3, Cal.

• Edward Kromer, Architect, 2445 Kensington Rd., Columbus, Ohio, recently began his own practice as a consultant; he was formerly architect and structural engineer for the Columbus Board of Education. David Schackne Jr. has succeeded him in that post.

• A. M. Martin, Architect & Engineer, with J. H. Lemmon and C. C. Bellomy, Associates, has opened offices at 2915 Texas Ave., Bryan, Tex. Mr. Martin was formerly with the firm of Caudill, Rowlett, Scott & Associates.

• Roland Logan Russell, A.I.A., announces the opening of offices at 333 N. La Cienega Blvd., Los Angeles 48, Cal.

Firm Changes

• Bettenburg Townsend Stolte, Architects and Engineers, have renamed their firm Bettenburg Townsend Stolte & Comb. Offices are at 1437 Marshall Ave., St. Paul, Minn.

• Leon Chatelain Jr., F.A.I.A., has announced the formation of the partnership Chatelain, Gauger and Nolan, with Mr. Chatelain, Earl V. Gauger, A.I.A., and James J. Nolan Jr., Engineer, as principals. The firm is located at 1632 K St., N.W., Washington 6, D. C.

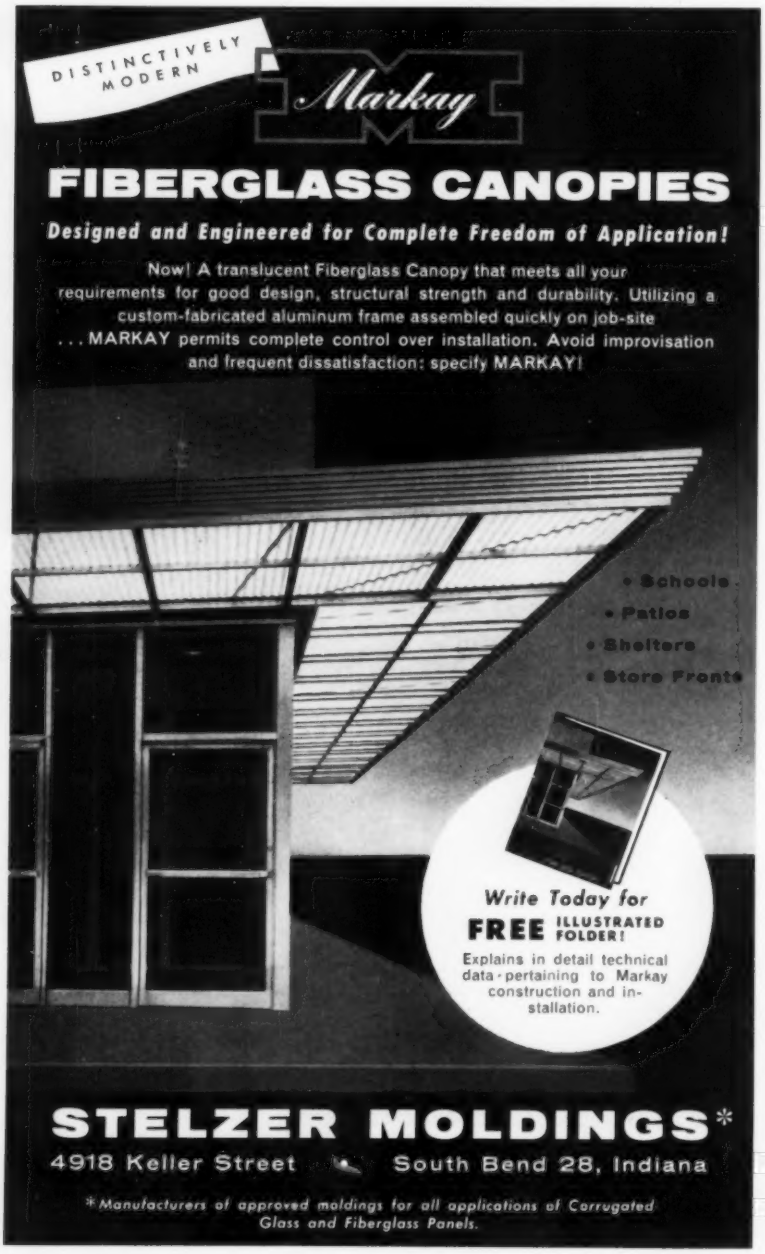
• Frick & Sweeney, Consulting Architectural Engineers, is a new firm composed of Walter Hiram Frick and John Miles Sweeney, at 950 Century Bldg., Pittsburgh 22, Pa.

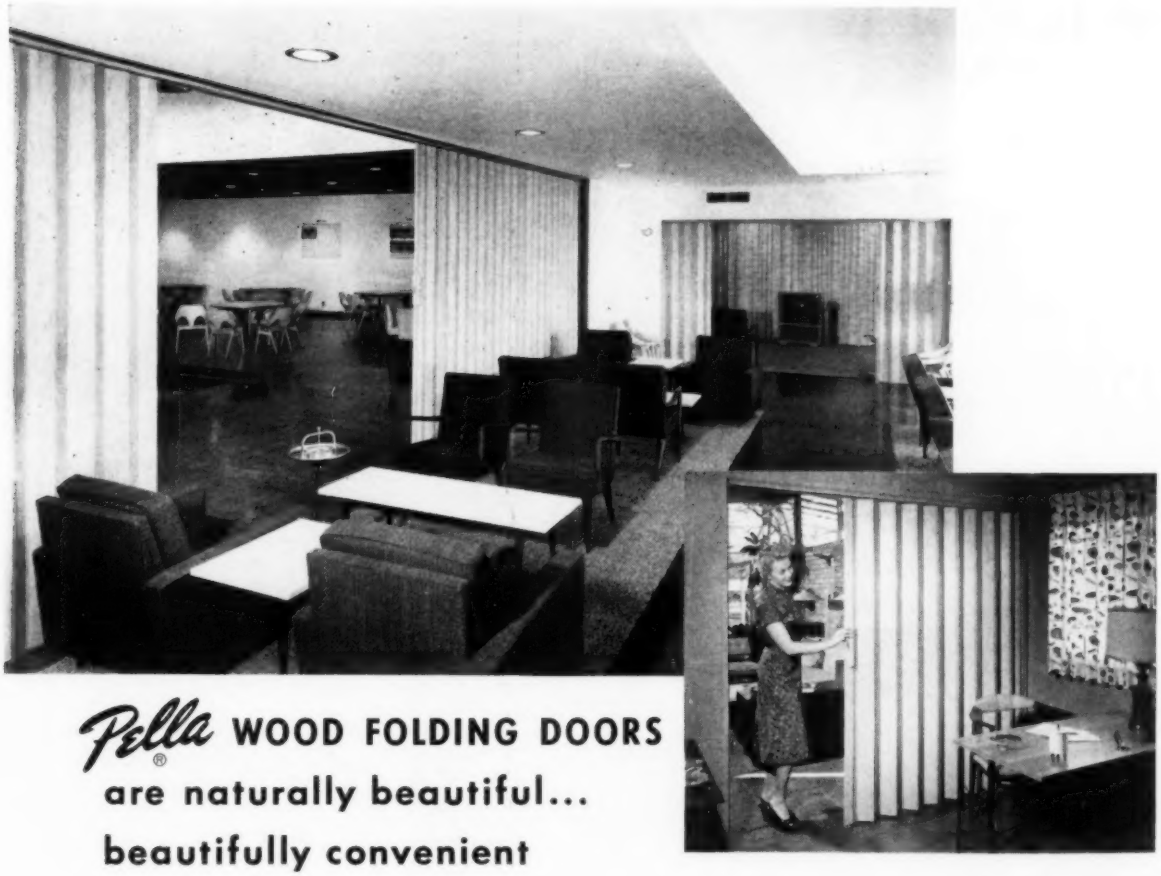
• Iwata & Jenkins, Civil and Structural Engineers, and Morris Doberne, Structural Engineer, have formed an association at 431 S. Western Ave., Los Angeles 5, Cal.

• Seymour Joseph, Wm. Charney Vladeck, Architects, E. Abraben, Designer, of New York, have opened Florida offices at 1134 Lincoln Road, Miami Beach.

• Keyes & Lethbridge, Architects, with

(Continued on page 348)


DISTINCTIVELY MODERN
Markay
FIBERGLASS CANOPIES
Designed and Engineered for Complete Freedom of Application!
Now! A translucent Fiberglass Canopy that meets all your requirements for good design, structural strength and durability. Utilizing a custom-fabricated aluminum frame assembled quickly on job-site ... MARKAY permits complete control over installation. Avoid improvisation and frequent dissatisfaction: specify MARKAY!
• Schools
• Patios
• Shelters
• Store Fronts
Write Today for FREE ILLUSTRATED FOLDER!
Explains in detail technical data pertaining to Markay construction and installation.
STELZER MOLDINGS*
4918 Keller Street South Bend 28, Indiana
*Manufacturers of approved moldings for all applications of Corrugated Glass and Fiberglass Panels.



Pella® WOOD FOLDING DOORS are naturally beautiful... beautifully convenient

Richly veneered in oak, pine, birch or Philippine mahogany... the natural wood grain beauty of PELLA DOORS enhances your designs, blends perfectly with woodwork and furniture.

Used as room dividers, PELLA DOORS make space much more flexible, create extra rooms instantly in homes, churches, schools, hospitals and offices. Use these folding doors to give ready access to closets and storage walls in hotels and motels without sacrificing floor or wall space.

PELLA DOORS operate smoothly, too. They're spring hinged for easy opening and closing. Sturdily constructed with *solid* wood laminated cores, they're resistant to warpage and abuse.

Get PELLA DOORS in stock or custom sizes, finished or unfinished, factory assembled, complete with all hardware and concealing track mould. No costly fitting on the job. Mail coupon below today for more information. Or see our catalog in Sweet's Architectural File. Representatives throughout U. S. and Canada.

Pella® WOOD FOLDING DOORS

ROLSCREEN COMPANY
Dept. H-59, Pella, Iowa

Gentlemen: Please send FREE literature on PELLA WOOD FOLDING DOORS and name of nearest PELLA dealer.

NAME

ADDRESS

CITY ZONE STATE

THE RECORD REPORTS

(Continued from page 346)

partners Arthur H. Keyes, A.I.A., Francis D. Lethbridge, A.I.A., and David H. Condon, and associates Marshall Gochnauer and George C. Graeber, have opened new offices at 1300 Connecticut Ave., Washington 6, D. C

Satterlee & Smith, Architects, composed of Nicholas Satterlee, A.I.A., and Cloethiel Woodard Smith, A.I.A., will continue the practice of architecture, city and community planning and related engineering services at 3 Dupont Circle, Washington 6, D. C.

• F. H. McGraw & Company, engineers and constructors, have elected Paul F. Pape, Engineer, and Charles DuBose, Architect, vice presidents of the organization. The firm's address is 51 E. 42nd St., New York 17, N. Y

• Rogers & Butler, Architects, have announced the association of Henry J. Stojowski, Architect, with the firm; Mr. Stojowski was formerly with William B. Tabler, Architect. Offices are at 219 E. 44th St., New York 17, N. Y.

• Thurman I. Potts, Architect, and Roland Robel, Architect, have merged to form the partnership of Thurman Potts and Roland Robel, Associate Architects, at First Federal Bldg., 107 First Ave. S. E., Watertown, S. Dak.

• Toltz, King, Duvall, Anderson & Associates, Inc., is the new name of the firm known formerly as Toltz, King and Day, Inc., Engineers & Architects. Offices are in the Pioneer Bldg., St. Paul 1, Minn.

• J. Frazer Smith & Associates have announced the reorganization of the firm with J. Frazer Smith, F.A.I.A., president; Zeno L. Yeates, A.I.A., executive vice president; J. J. Thomason, vice president and chief engineer; William B. Bekemeyer, treasurer; and W. Porter Jones, secretary. The firm is in new offices at Room 207, Towers Bldg., 1503 Union Ave., Memphis, Tenn.

New Addresses

Robert Cummins, A.I.A., 315 Maritime Bldg., New Orleans 12, La.

Joe Lort Jr., Architect, 211 Clayton St., Denver, Colo.

Ricciuti Associates, Architects-Engineers, 521 Royal, New Orleans 16, La.

Henry Sandig, Architect, 38 Park Row, New York 38, N. Y.

Frederick E. Wigen, Architect and Associates, 1016 N. Michigan Ave., Saginaw, Mich.

USPHS ASKS CONTINUATION OF WATER POLLUTION RULE

The Congress is being urged by the Administration to extend the water pollution control act beyond its June 30 expiration date. A two-year continuation of the present authority under terms of amendments passed by the Senate last year would preserve and protect the primary responsibilities and rights of the states in controlling their own water pollution, it is contended by the U. S. Public Health Service, administering agency.

The present law gives PHS some enforcement authority but this is limited to pollution affecting a state other than the state in which it originates. Federal court action can be brought subsequent to public hearings and contingent upon the consent of the state in which the pollution originates.

(More news on page 352)

Let Him Help Lessen Your Burdens

Your Pratt & Lambert representative is an experienced architectural consultant, trained to cooperate in the development of complete color plans and painting specifications. You will find that his recommendations are realistic and easy to follow, in keeping with the results you want and consistent with project and budget.

If you haven't worked recently with your Pratt & Lambert representative, we urge that you do. He will bring a fresh approach to color planning, information about new products, answers to painting problems, all without obligation, of course. Write to your nearest Pratt & Lambert Architectural Service Department: 75 Tonawanda St., Buffalo 7, N. Y.; 3301 38th Ave., Long Island City 1, N. Y.; 320 W. 26th St., Chicago 16, Ill.; 254 Courtwright St., Fort Erie, Ontario.

PRATT & LAMBERT-INC.

A Dependable Name in Paint since 1849

NEW YORK • BUFFALO • CHICAGO • FORT ERIE, ONT.

Cherry V-Plank and plywood built-ins make the fireplace wall a focal point, give the whole room spaciousness and charm. Yet all the V-Plank paneling shown costs just $105 retail.

Cherry V-Plank by Weldwood

. . . a textured panel for comfortable traditional, or a warm accent for modern. Beautifully *prefinished*—at 78 cents per square foot*

The warmth of native American cherry . . . handsomely textured in a random plank effect . . . gives a glowing beauty to this traditional setting. Available in a variety of popular woods (see below), Weldwood V-Plank panels give new opportunities for distinctive interiors—traditional or modern—at remarkably low cost. *Colonial* V-Plank provides pegged effect.

CONVENIENT SIZE: Stocked in 4 by 7 and 4 by 8 foot sizes, ¼-inch thick. Large panels save handling and installation time—yet give effect of separate planks. Installation can be by Weldwood Contact Cement method—which requires no face nails—or by face nails concealed in v-grooves, which fall on 16-inch centers. Beveled edges give v-groove effect between adjacent panels, and conceal joints.

FINISH: V-Plank panels are available prefinished, or unfinished at lower cost. Unfinished panels can be finished to specification after installation. Weldwood factory finishes meet Government Specification MIL-F-002319A (QMC) of July 10, 1953—and save time, mess, and cost of on-the-job finishing. The slight additional cost of prefinished panels is considerably less than the cost of on-the-job finishing—and V-Plank panels, like all interior Weldwood paneling, are guaranteed for the life of the building.

USES: V-Plank can be used vertically or horizontally, and provides a striking interior for residential, commercial, and office use. Easy to keep clean, prefinished V-Plank requires only an occasional waxing.

WHERE TO SEE IT: Call your Weldwood Architect's Service Representative, or visit your lumber dealer or any of 87 United States Plywood Branch offices in principal cities. In Canada: Weldwood Plywood Ltd.

Suggested Specification: Wall paneling shall be Weldwood (species) V-Plank plywood paneling, as manufactured by United States Plywood Corporation, ¼-inch in thickness, in panels (4 by 7, 4 by 8) feet in size, glue bond shall be Urea Formaldehyde hot press method; exposed faces shall be in random-plank effect, with alternate grooves falling on 16-inch centers; panels to be prefinished in accordance with U. S. Government Specification MIL-F-002319 A (QMC); panels to be installed (horizontally, vertically), over (existing wall, on studs, or on furring strips), face nailed with ¼-inch brads on 6" centers on outer edges of panel and on 12" centers on intermediate studs, concealed in v-grooves (or with Weldwood Contact Cement, according to instructions of manufacturer).

Prices per square foot of 6 fine V-Plank prefinished woods: (from left) walnut 78¢, Korina® 78¢, mahogany 78¢, Samara† 51¢, cherry 78¢, oak 78¢. †Trade Mark *Approximate Retail Price

Weldwood®

V-Plank† Paneling

Product of

UNITED STATES PLYWOOD CORPORATION

United States Plywood Corporation
Architect's Service Department
55 West 44th Street, New York 36, N. Y.

Please send me data folder on Weldwood V-Plank, together with sheet of installation drawings and instructions.

☐ Please include 48-page Weldwood full-line catalog with price information. AR 5-56

Name.....

Company.....

Address.....

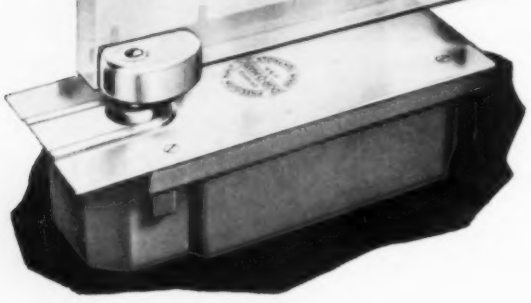
.....

DOR-O-MATIC

CONCEALED-IN-THE-FLOOR

DOOR CONTROLS

for contemporary entrances



DOR-O-MATIC INVISIBLE DOR-MAN NOW AVAILABLE IN 2 MODELS

If your plans call for completely automatic door controls, specify the Invisible Dor-Man . . . in carpet-actuated or handle-actuated models. Either type will open your doors quickly, quietly, automatically.

SEND FOR ILLUSTRATED BROCHURES TODAY

6132

Choose from 31 Models . . .
there's one for every type door
. . . in any type building

Specify Dor-O-Matic for metal, glass, or wood doors. Installed with any one of them, Dor-O-Matic gives uniform opening control and produces a positive, 2-speed, door closing action . . . yet your door retains a clean, eye-appealing appearance. There is no unsightly surface-applied closer to mar entrance design. Special Dor-O-Matic features include a positive back-stop and built-in hold-open device (optional). Finest construction and simple, safe design assure long, trouble-free service . . . just a few reasons why Dor-O-Matic is best for contemporary entrances.

Only DOR-O-MATIC provides these 10 service advantages

1. Positive uniform control
2. Built-in hold-open device
3. No accidental hold-open
4. Positive centering of door
5. Positive back-stop
6. Two-speed closing action
7. Built-in leveling screws
8. Permanent oil seal at spindle
9. No seasonal adjustment
10. Easy installation

DOR-O-MATIC

DIVISION OF REPUBLIC INDUSTRIES, INC.
4444 North Knox Avenue • Chicago 30, Illinois
IN CANADA: Dor-O-Matic of Canada, 550 Hopewell Ave., Toronto 10, Ont.
EXPORT REPRESENTATIVES: Consultants International, 11 W. 42nd St., New York 36

ON THE NEWS FRONT WITH STRUCTURAL STEEL

Department Store in Miami – The framework of this new Jordan Marsh store in Miami, fabricated from Bethlehem structural steel, has perfect vertical and horizontal continuity. All columns are in a straight line from the ground floor to the top and all beams are in a straight line from one side of the structure to the other. To save time in the field, the columns were fabricated in 60-ft lengths at Allentown, Pa., and shipped by rail to Philadelphia, then by water to Miami. The 1777 tons of Bethlehem structural shapes are held together by nearly nine miles of quarter-inch welds.

Architects: Weed, Russell, Johnson, Associates, Miami; *General Contractor:* Frank J. Rooney, Inc., Miami; *Structural Engineer:* Jorgensen and Schreffler, Miami; *Steel Fabricator and Erector:* Lehigh Structural Steel Co., Allentown, Pa. *Owner:* Bessemer Properties, Inc.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA. On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

BETHLEHEM STEEL

(Continued from page 348)

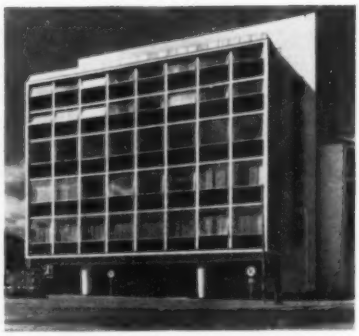
INDUSTRIA, Vol. 51, No. 11E (Sweden), asked a number of Swedish architects to select, for its English-language edition, choice examples of contemporary Swedish architecture — three of their selections are shown at the left.

In an accompanying article by Betty Burnett, some Swedish architectural requirements were described. Of the constant needs, Miss Burnett wrote: "In this country, there is an inherited love of tradition, a desire to maintain the idyllic aura of cities, a craving for light and space quite natural to a people closed in by darkness during a long winter."

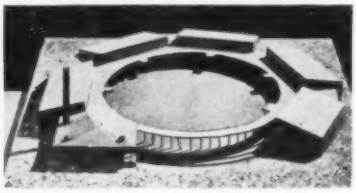
Some of the needs, however, are new. The country has felt the effects of an acute housing shortage since the end of the war — Stockholm at one time had an official waiting list of 80,000 for apartments — and the major emphasis has been on housing construction.

Sweden has also begun to experience, like much of the rest of the world, the urban land pinch, and is having, in some cases, to relinquish her taste for horizontal building. "The popular prewar theory among architects and city planners, which carried over to the postwar years, was the long, low building for living as well as working," *Industria's* author said. "Now, as large suburban areas of three- and four-story

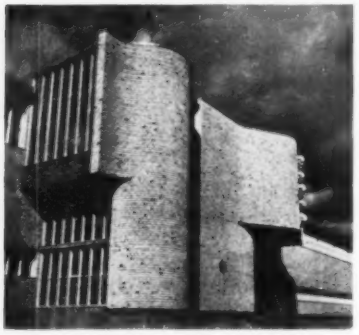
(Continued on page 356)



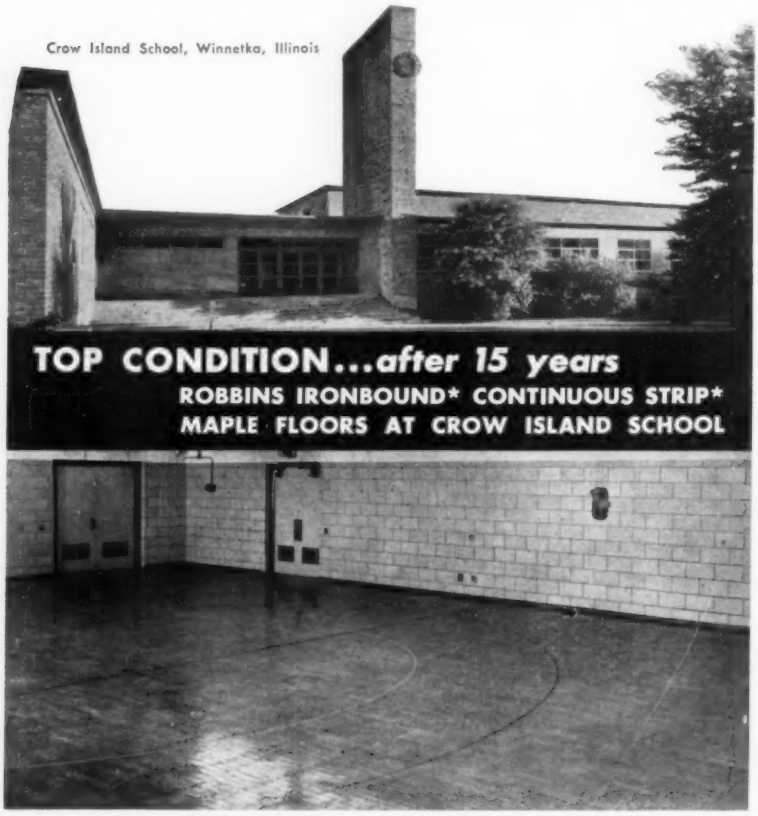
Above: hotel at Värnamo, in southern Sweden, was designed by architect Bent Jörgen Jörgensen, built of glass, cement and enamel panels



Grade school at Danderyd, near Stockholm, has circular corridor enclosed in glass on the classroom side; Carl Nyrén was the architect



Detail of a paper pulp factory at Östanfors, by Ralph Erskine, a British architect working in Sweden


Crow Island School, Winnetka, Illinois
TOP CONDITION...after 15 years
ROBBINS IRONBOUND* CONTINUOUS STRIP*
MAPLE FLOORS AT CROW ISLAND SCHOOL

Robbins Ironbound Continuous Strip Maple Floor in gymnasium. Unretouched photo, taken August 1955.

Crow Island maintenance men say the Robbins floors stay in top condition . . . they're easy to clean, easy to maintain, and after 15 years, show little sign of wear.

From coast to coast, in classrooms, gymnasiums, school shops . . . wherever a floor must be able to "take it" and remain smoothly beautiful, you'll find Robbins Ironbound Continuous Strip Maple Floors. Robbins floors mean real long run economy because they're easy to care for and look like new after generations of hard use.

Write for the name of your nearest Robbins contractor-installer. He'll show you specifically how much you save with beautiful maple flooring.

Address inquiries to Robbins Flooring Company, Reed City, Michigan

MILLIONS WALK DAILY ON ROBBINS FLOORING

*T.M. Reg. U.S. Pat. Off.

ROBBINS FLOORING COMPANY

World's Largest Maple Flooring Manufacturer

Reed City, Michigan • Ishpeming, Michigan

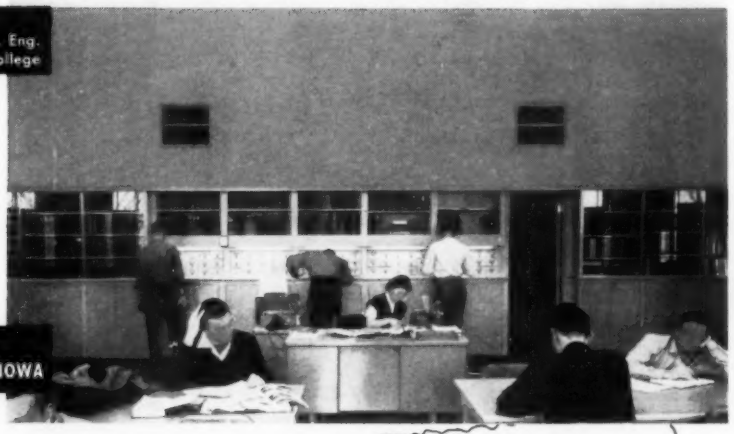
COLLEGE for

NEO-RAY LOUVRED CEILINGS

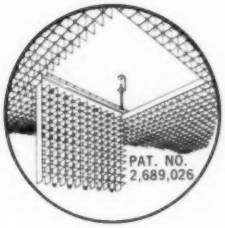
*MET WITH ALL SPECIFICATIONS ... AND AT THE RIGHT COST

Architect: PROF. LEONARD WOLF
Head of the Dept. of Arch. & Arch. Eng.
and supervising architect for the college

Consulting Illuminating Eng. PROF. W. B. BOAST
Head of the Dept. of Elec. Eng.



ENGINEERING LIBRARY
IOWA STATE COLLEGE, AMES, IOWA



*Selection of Neo-Ray Louvred ceiling came about first through specifications for such a ceiling. Final selection was made by the physical plant department after contacting the manufacturer of Neo-Ray and the manufacturer of a similar type ceiling. Neo-Ray met with all specifications and at the cost ceiling allotted to the job.

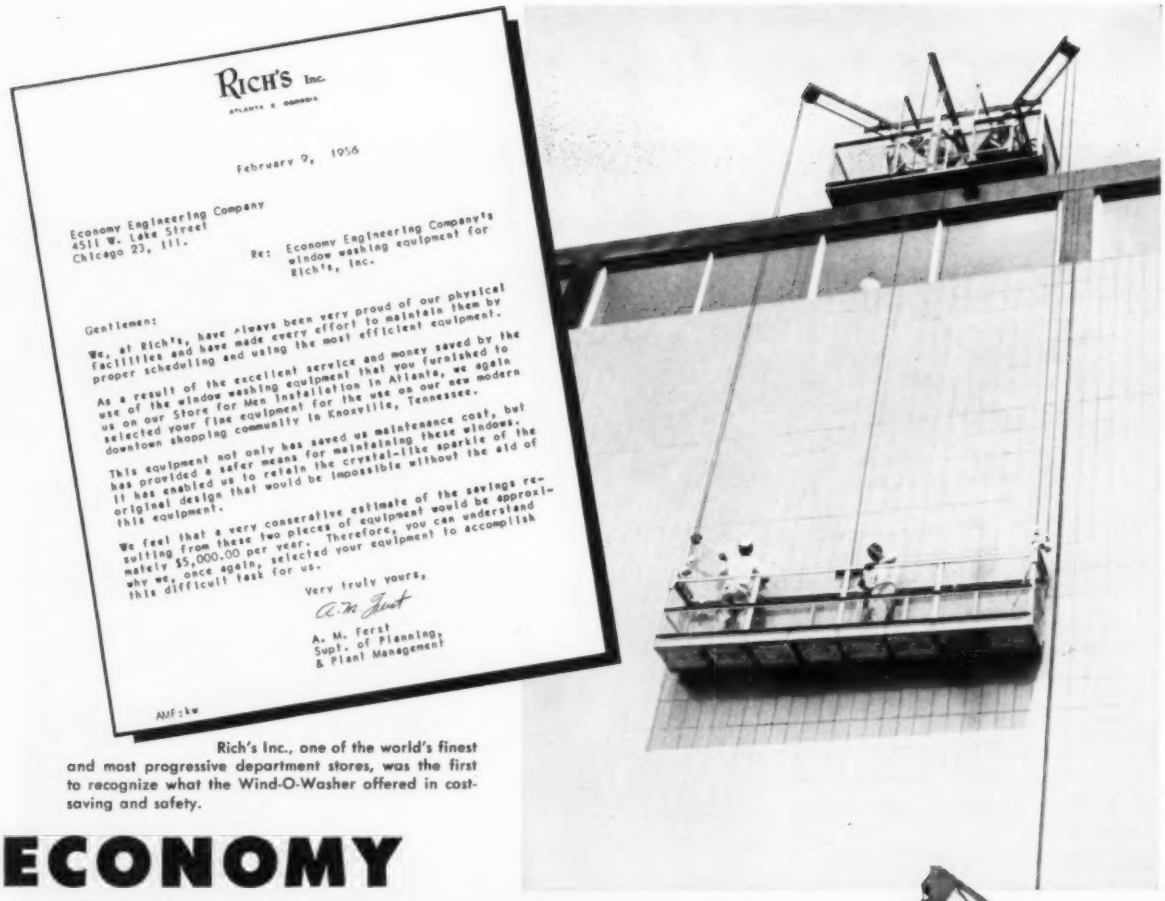
Send for NEW LOUVRED CEILING catalog No. 544
See our catalog in Sweet's Architectural File for 1956 sec. 31a/NE

SPECIAL LOUVRE DESIGNS?
Let the "know-how" of our engineering department assist you. No obligation, of course.

MANUFACTURERS OF LIGHTING FIXTURES INCLUDING:

Louvred Ceilings • Rote-Strip • Luminette • Kleen-VU KVT Troffers

NEO-RAY PRODUCTS, Inc.
315 East 22nd St. • New York 10, N. Y.



RICH'S Inc.
ATLANTA, GEORGIA

February 9, 1956

Economy Engineering Company
4511 W. Lake Street
Chicago 23, Ill.

Re: Economy Engineering Company's window washing equipment for Rich's, Inc.

Gentlemen:

We, at Rich's, have always been very proud of our physical facilities and have made every effort to maintain them by proper scheduling and using the most efficient equipment.

As a result of the excellent service and money saved by the use of the window washing equipment that you furnished to us on our Store for Men installation in Atlanta, we again selected your fine equipment for the use on our new modern downtown shopping community in Knoxville, Tennessee.

This equipment not only has saved us maintenance cost, but has provided a safer means for maintaining these windows. It has enabled us to retain the crystal-like sparkle of the original design that would be impossible without the aid of this equipment.

We feel that a very conservative estimate of the savings resulting from these two pieces of equipment would be approximately $5,000.00 per year. Therefore, you can understand why we, once again, selected your equipment to accomplish this difficult task for us.

Very truly yours,

A. M. Ferst

A. M. Ferst
Supt. of Planning
& Plant Management

AMF:kw

Rich's Inc., one of the world's finest and most progressive department stores, was the first to recognize what the Wind-O-Washer offered in cost-saving and safety.

ECONOMY
Wind-O-Washer

A machine designed by Economy engineers for servicing buildings exteriors.

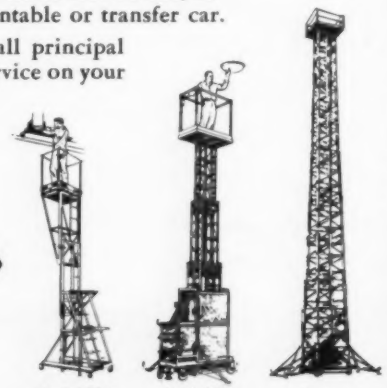
The architect can now exercise complete freedom in the design of building exteriors, unrestricted by the necessity of specifying movable glass for window washing.

The Wind-O-Washer is electrically operated from the working platform by push button controls for both up and down and horizontal movements. The machine travels on a track, and when not in use, is backed out of sight by means of a turntable or transfer car.

Economy representatives, located in all principal cities, can give personal engineering service on your problems and make recommendations with estimates. Each installation is individually engineered.

Write E. W. McDonnell for Catalog.

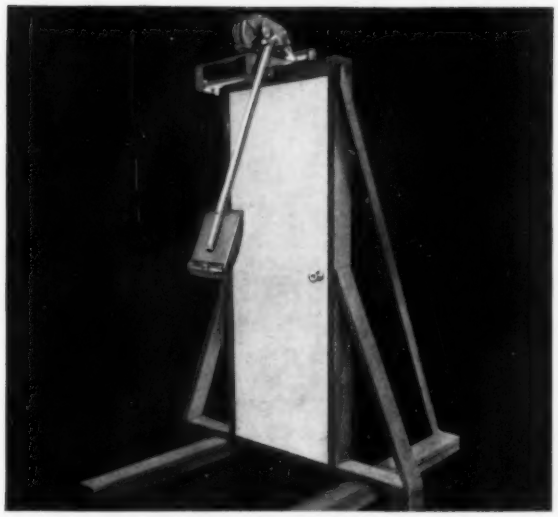
For interior maintenance. *Economy Hi-Reach Telescopers are the answer to the problem of servicing overhead lighting and hard-to-reach interior maintenance work. For many years these Hi-Reach Telescopers have been widely used throughout industry and by institutions.*



Model PUL 10'9" to 15' | Model LB 20' to 35' | Custom up to 100'

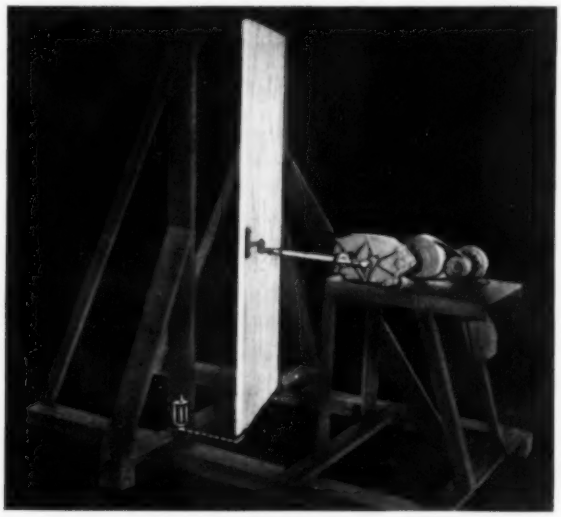
ECONOMY ENGINEERING CO.
4530 W. Lake St., Chicago 24, Ill.
New York Office: 342 Madison Ave., New York 17, New York

ENDURANCE...*proved by torture*



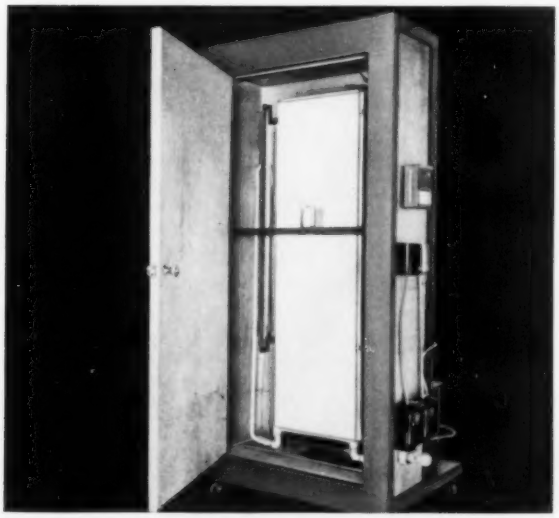
Proved by 529,879 bangs

This pendulum banged a 35-pound weight against a Curtis New Londoner hollow-core door 38 times per minute. After 529,879 bangs, door was good as new.



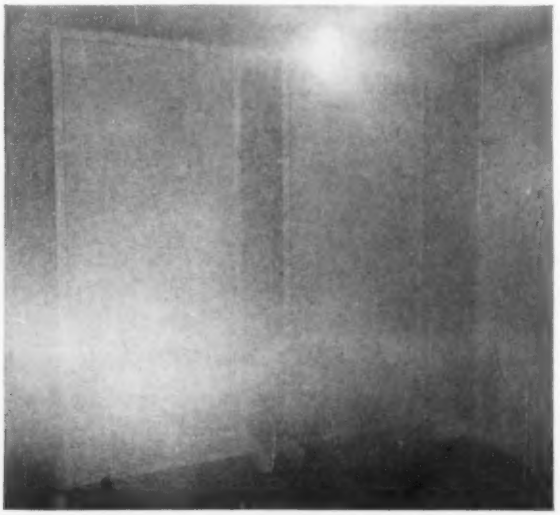
Proved by 642,934 slams

Slammed 72 times per minute—the equivalent of a lifetime of slamming—the Curtis New Londoner door came through this tough test unscarred—unmarred.



Proved in chamber of horrors

Subjected to 166 cycles of temperatures ranging from 110° to 0° F., a Curtis New Londoner door showed no peeling of face panels or changes in dimensional stability.



Proved in pea soup fog

After undergoing more than 3 months of humidity changes from highs of 90%-95% to lows of 20%-30%, the New Londoner doors were still flat and aligned.

Complete data yours on request!

Sold by leading lumber and Curtis Woodwork dealers.

CURTIS NEW LONDONER HOLLOW-CORE FLUSH DOORS

CURTIS

WOODWORK *heart of the home*

AR-5A-56

Curtis Companies Service Bureau
200 Curtis Building, Clinton, Iowa

Please send information on Curtis New Londoner Doors.

Name.....

Address.....

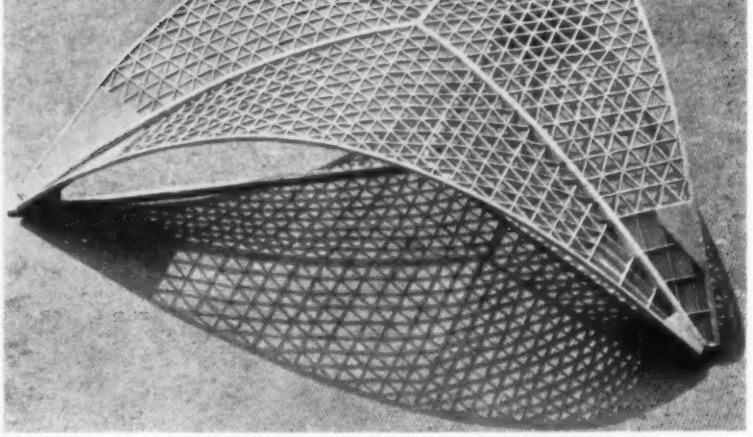
City.....*State*.....

THE RECORD REPORTS

CURRENT PERIODICALS

(Continued from page 352)

apartment houses are beginning to crowd the city limits and the number of apartment seekers is growing, architects have been forced to reassess their theories. The demand now is for vertical buildings. There is a frenzied flurry of skyscraper dwellings (eight to 12 stories) once thought impossible for the Swedish family."



Above: model of the welded frame for the proposed industrial display center near Paris. Below: photomontage of the building as it will appear on the Place de la Défense

TECHNIQUES ET ARCHITECTURE, November 1955 (France), carried a project story on *le Centre National des Industries et des Techniques,* designed by architects R. Camelot, J. de Mailly, B. Zehrfuss and engineer P.-L. Nervi. To be located at Puteaux, a suburb of Paris, the project is intended for permanent and special exhibits and as a center for French industrial associations and an industrial library.

The center will be composed of two buildings — a three-cornered vault covering the exhibition space and an administration building housing offices, a restaurant, meeting rooms and storage space. A hall to be built under one of the six avenues radiating from the Place de la Défense will connect the buildings. In addition to interior exhibition space, provision will be made for open-air display.

The structure of the vault will be of welded metal covered with a skin of aluminum. Its triangular shape was suggested by the shape of the site.

All of the buildings will have concrete foundations.

ARCHITECTURAL DESIGN, February 1956 (Great Britain), also reported an exhibition hall project, this one for "the only really great site left in London," the Crystal Palace site. The design of the London County Council, under the direction of architect J. L.

(Continued on page 358)

DODGE Building Studies

DESIGN FOR MODERN MERCHANDISING: Stores, Shopping Centers, Showrooms

***by the editors of* ARCHITECTURAL RECORD**

A detailed study of the physical design of selling establishments of all types. Included are stores for soft and hard goods, food stores, department stores, wholesale showrooms, and that offspring of a booming, suburban market, the shopping center. 254 pages, 8¾ x 11⅝, over 600 illustrations, $8.95.

PLANNING ELEMENTARY SCHOOL BUILDINGS

by Engelhardt, Engelhardt and Leggett

A comprehensive study of design, equipment and facilities for elementary schools. The authors relate the fundamentals of daily teacher-pupil activity to the architect's design problems. Over 200 illustrations plus extensive charts of activities, equipment and facilities. 268 pages, 8¾ x 11½, $12.50.

DESIGN AND CONSTRUCTION OF GENERAL HOSPITALS

by the U. S. Public Health Service

This vital book correlates hospital design with the new techniques of diagnosis, surgery, physical and mental therapy developed by modern medicine. Architects, engineers, physicians, surgeons, nurses, dieticians and hospital administrators all contributed their special knowledge and experience. 214 pages, 8¾ x 11⅝, Illustrated, $12.00.

INDUSTRIAL BUILDINGS

***by the editors of* ARCHITECTURAL RECORD**

Contains 116 case studies of industrial projects completely illustrated with over 1500 photographs, plans, charts and diagrams. Here are power plants, research centers, manufacturing buildings and storage structures. Hundreds of specialized industrial building design problems are covered by some of the world's leading specialists. 546 pages, 8¾ x 11½, $9.00.

Any Dodge Book may be orderd on a 10-day approval and returned without obligation if not found satisfactory

DODGE BOOKS, F. W. DODGE CORP.

119 West 40 Street, New York 18, N. Y.

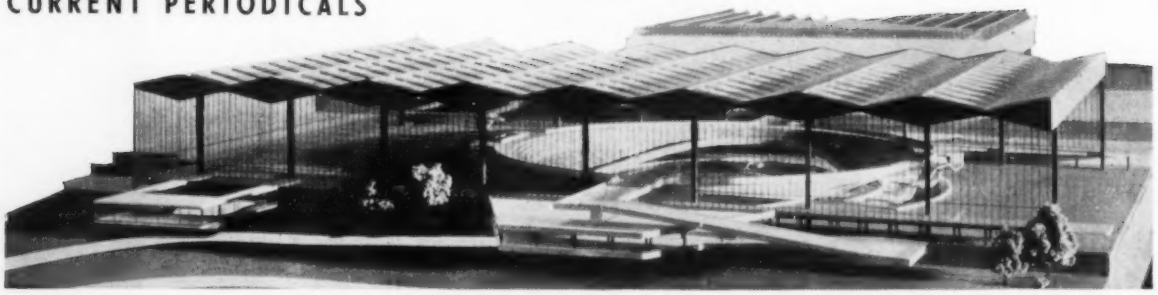
930

GLASS TO PLAN WITH...

The swift evolution of new architectural forms is matched by new developments in figured glasses that complement advanced planning and design. At the 'thinking stage' investigate the textures and color of glass that will blend smoothly into your plans. Write for the catalogue of the Pilkington selection of modern and traditional figured glass patterns.

PILKINGTON BROTHERS LIMITED, ST. HELENS, ENGLAND
Represented by Pilkington Bros. (Canada) Limited
Head Office: 165 Bloor Street E., Toronto, Ontario

(Continued from page 356)



Fairhurst T.M. Reg.

Unitfold® folding walls

Specified for Wellesley College
Wellesley, Mass.

Like Wellesley, schools and universities throughout the country use **Unitfold** Folding Walls to divide classrooms, dining halls, and gymnasiums. Versatile, handsome, **Unitfold** Walls give the appearance of a permanent, rigid wall — yet separate units fold easily and quickly to provide clear opening between rooms.

View shows Unitfold Wall in partly open position.

ADVANTAGES:

- No mechanical power required
- Forms rigid wall without hinges, bolts, or visible hardware
- All weight supported on floor
- Folds in minimum space
- Automatically adjusts to misalignment of floor caused by settling of building

Write for details

Wall opened. Folded units are unobtrusive at left. Coolidge, Shepley, Bulfinch & Abbott, Architects.

John T. Fairhurst Co., Inc.
45 West 45th Street New York 36, N.Y.

Martin, fills the need, the editors of the magazine feel, of "an architectural concept worthy of [the site] and of the old structure, the first modern building."

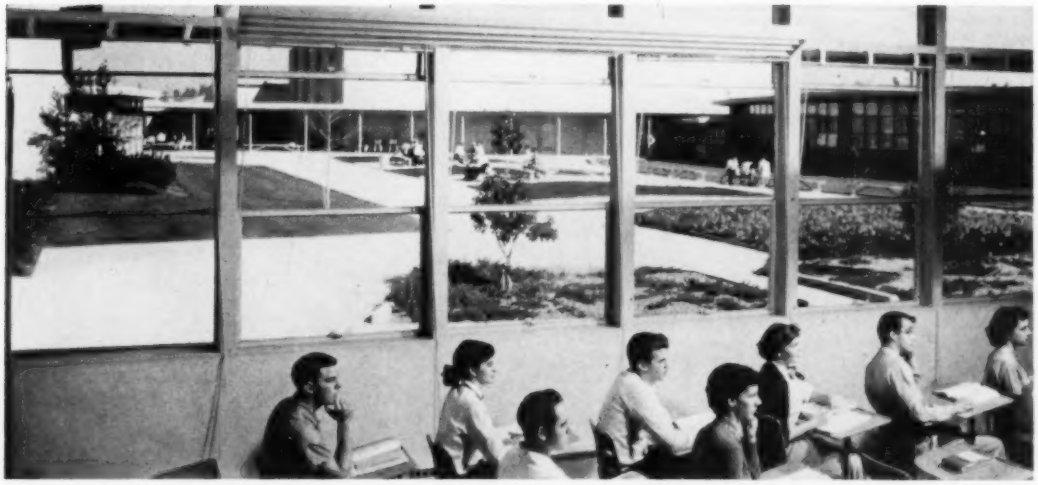
Two units are proposed: a small hall and the large exhibition hall (model above). The large hall, which will be built along a ridge on which the original Crystal Palace stood, will contain, besides the exhibition space, an arena and amphitheater. To be 80 ft high and 1600 ft long, the building will have a roof span of 400 ft.

The exhibition hall is the most recent proposal made for the Crystal Palace site, for which the L.C.C. plans a major recreation center for South London, to include a National Youth Center, an outdoor theater, a riding school and a car racing track.

MÓDULO, August 1955 (Brazil), is the second edition of a bimonthly subtitled "A Review of Architecture and Plastic Arts." In this issue: a project at the University of Rio de Janeiro by architect José Souza Reis; the full text of a speech by architect Lucio Costa; and contributions from the "principal names in Brazilian architecture" — Roberto, Reidy, Artigas, Uchôa, Levi, Bernardes and Niemeyer. The magazine contains English, French and German translations, and is published at Avenida Presidente Vargas, 502, Rio de Janeiro.

BYGGNADS-INGENJÖREN, December 1955 (Sweden), "A Review of International Building-Technique and Building-Economy," contained feature articles on "the rationalization of the building branch" (efficiency on the site) and on a new Swedish modular wood block, as well as shorter articles on some new schools and on Japanese architecture. The English translation is brief and rather below the level generally expected from the Scandinavians. Offices are at Barnhusgatan 4, Stockholm C.

Bring all of this



inside for the sake of those in here

Children live so much of their lives in classrooms. That's why Daylight Walls are vitally important.

44 out of 45 teachers surveyed in a recent research study were highly pleased with classrooms having daylight walls. These comments are typical:

"The lighter, brighter surroundings create a good environment for learning."

"Students do not get tired and restless, because there is no feeling of *confinement*."

And most of the teachers were quick to admit that they, too, were a lot happier in classrooms with daylight walls.

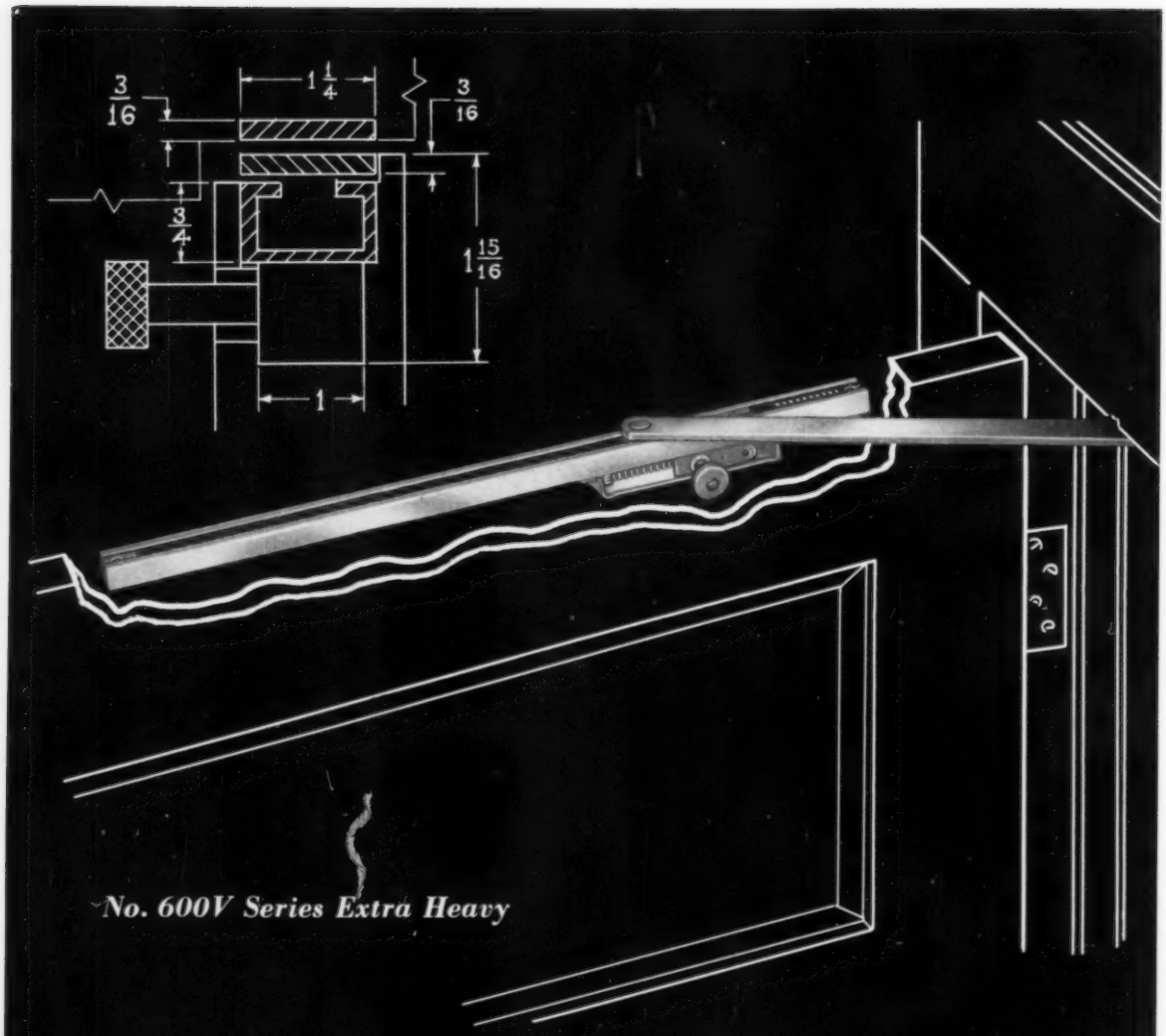
Send for your free copy of this complete research report by Paul R. Hensarling, Director of Administrative Research and School Community Relations for Port Arthur, Texas.

For your free book on school daylighting write to Dept. 4156, Libbey·Owens·Ford, 608 Madison Ave., Toledo 3, Ohio. And for cost estimates, etc., call your Libbey·Owens·Ford Glass Distributor or Dealer (listed under "Glass" in phone book yellow pages).

LOF GLASS

DAYLIGHT WALLS

LIBBEY•OWENS•FORD . . . *a Great Name in Glass*



No. 600V Series Extra Heavy

CONCEALED AUTOMATIC DOOR HOLDER

APPROVED BY
VETERANS ADMINISTRATION
FF-H-111a-TYPE 1160

SARGENT & GREENLEAF INC.

ROCHESTER 21, NEW YORK

Now... you can get STEEL ROOF DECK that's *Bonderized!*

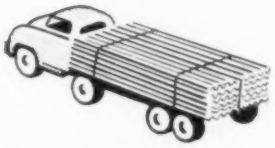
Brand new addition to the list of architectural products made better by Bonderite*! Now you can specify steel roof deck with the protection of paint-anchoring, corrosion resistant Bonderite under the prime paint coat.

Bonderite, applied in one of the largest automatic systems in all industry, makes this famous manufacturer's roof deck a greater value than ever, without increasing your cost.

Bonderite, as you know from your experience with steel windows, metal panels, partitions, lighting fixtures and other painted metal equipment, does these three things: It anchors paint. It resists rust and corrosion. It preserves appearance.

For your own and your customer's satisfaction, specify Bonderized* roof deck.

**Reg. U.S. Pat. Off.*



PROTECTED IN SHIPMENT, STORAGE AND SERVICE

On guard all the way from plant to completed job! Bonderite protects the smooth, tight prime coat, prevents chipping, peeling, and spreading finish failure.

Since 1914— leader in the field

PARKER RUST PROOF COMPANY
2185 E. MILWAUKEE, DETROIT 11, MICHIGAN

BONDERITE	BONDERITE and BONDERLUBE	PARCO COMPOUND	PARCO LUBRITE	TROPICAL
corrosion resistant paint base	aids in cold forming of metals	rust resistant	wear resistant for friction surfaces	heavy duty maintenance paints since 1883

THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 48)

the several states in arriving at these estimates could lead to erroneous conclusions unless they were considered carefully in the analysis, Commissioner Brownell pointed out, adding that although the Office of Education supplied broad criteria, each state set and applied its own standards in developing its particular plan.

"Big Classroom Deficit"

"However you interpret the facts, it is clear that there is a big classroom deficit," he observed. "There will be many classrooms needed each year as far as we can see ahead. Much activity is in process and more is needed if sufficient classrooms — by any reasonable standard — are to be provided. It will cost a lot of money, and many states will have to make changes in existing financial provisions in order to build the necessary classrooms."

The first, or status, phase of the school facilities survey was designed to secure an inventory of existing facilities and estimated current shortages as of September 1952. It did not attempt to project the plans of the states through 1960 as does the second or long-range planning phase.

Discussing the school plant program, the report outlined six factors contributing to the current and anticipated schoolhousing needs. These were: (1) enrollment increases; (2) mobility of population; (3) reorganization of school districts; (4) school program changes; (5) backlog accumulation of need; and (6) financing limitations.

State plans for meeting their school building needs are covered in some detail in the latest report. It is indicated that of the programmed school plants in 38 states, 73 per cent are elementary, 21 per cent secondary, and only six per cent are combined elementary-secondary. By comparison, the status phase showed 81 per cent of all schools to be elementary, only six per cent secondary, and 13 per cent of the combined type.

Changing Characteristics

The distribution of programmed projects in the second-phase reports indicates that larger elementary schools and more separate high schools are being planned, and that fewer high schools are being combined with elementary schools, the Office of Education said. Data indicates that the nationwide five-year projected school plant program includes 476,505 instruction rooms, and that the total capital outlay cost of the program, exclusive of school buses, will amount to $15,841,043,000.

Excluding site, the average cost of these schools per pupil was figured at $1169, per room at $32,772, and per sq ft at $14.28. Average gross area per pupil was shown to be 82 sq ft; per room, 2294 sq ft. The average number of rooms in all buildings planned was 16. New school plants account for 55 per cent of the estimated cost of all projects, additions to existing schools account for 39 per cent, rehabilitation and remodeling for three per cent, and new sites and site improvements for three per cent.

Of the total estimated cost, 47 per cent is for elementary schools, 41 per cent for secondary, and 12 per cent for combined elementary-secondary. Further, it is shown that 31 per cent of all the programmed classrooms are in new elementary schools while 21 per cent are in additions to existing elementary schools. This makes a total of 52 per cent

(Continued on page 366)

this unique Schlage

"FRICTION RING"

means shock-proof, lock installations

With this cleverly designed "friction ring"* the inside rose of Schlage heavy-duty locks resists unintentional loosening... can never back off from door surfaces. After the inside rose is installed, the ring's white vinyl teeth are turn-resistant to the jarrings of daily door operation. Result — no more loose inside roses and bothersome lock rattles. Yet, under intentional unscrewing of the inside rose, the same flexible gear teeth do an about face ... and the lock is quickly, easily removed from the door.

This built-in "friction ring" is typical of the plus features received when you specify Schlage heavy duty locks ... only one of the many reasons Schlage's outstanding lock designs are the quality standard for commercial and institutional buildings throughout the world.

For the latest technical information on Schlage locks, contact your Schlage representative or write for Catalog #627-A-5.

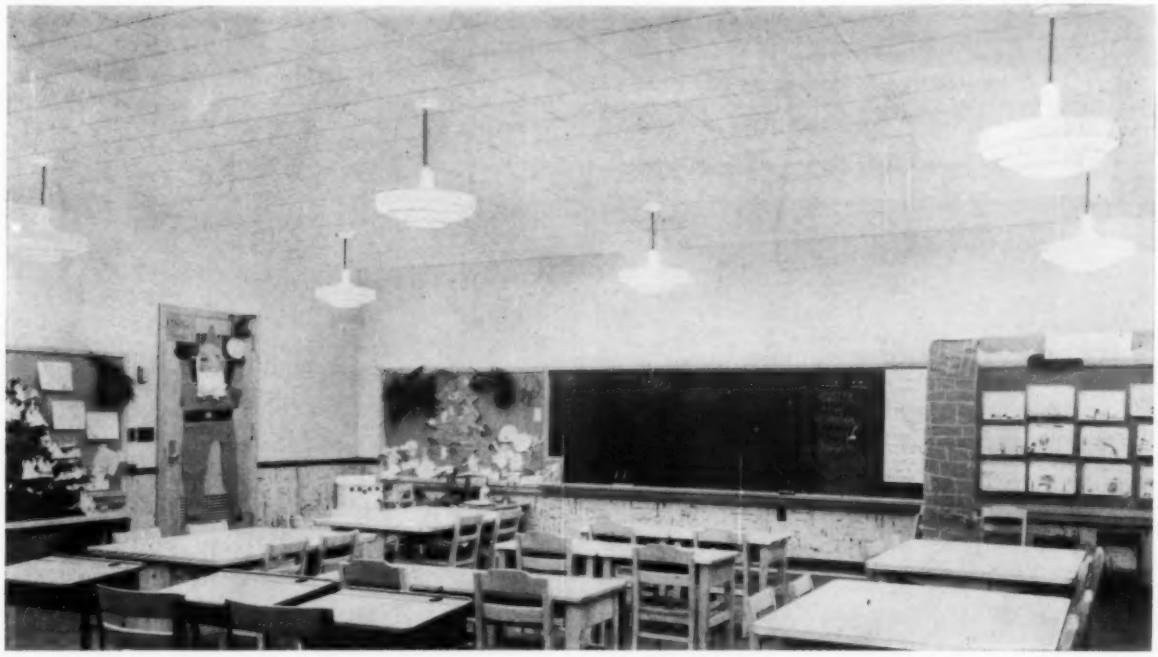
SCHLAGE ©

SCHLAGE LOCK COMPANY

SAN FRANCISCO • NEW YORK • VANCOUVER, B. C.

Address all correspondence to San Francisco

*PATENT APPLIED FOR



North Eggert School, Eggertsville, New York • Architect Duane Lyman & Assoc. • Lighting designed by E. S. Burrows

A School Problem...IN LIGHTING*

To provide recommended levels of good quality illumination in a classroom with LOW CEILINGS

THE BASIC FACTS . . . Classroom shown above measures 29′ by 27′ by 9′ 3″ high. Surface characteristics are as follows: White ceiling, perforated acoustic tile—80% RF; Green walls, cinder block—55% RF; Natural wood trim—40% RF; Mottled gray, asphalt tile dado—25% RF; Dark green floor, asphalt tile—10% RF†; Black chalkboard—7% RF†; Natural wood desk top—50% RF; Light tan window shades—60% RF.

†Dark floor and chalkboard not recommendations of American Standard Practice for School Lighting.

**Data as reported in the February 1956 Issue of*
ILLUMINATING ENGINEERING

Data submitted by Niagara, Mohawk Power Corp. shows that SILVRAY Concentric Ring Silvered Bowl Units can successfully solve problems of **LOW CEILING SCHOOL LIGHTING**

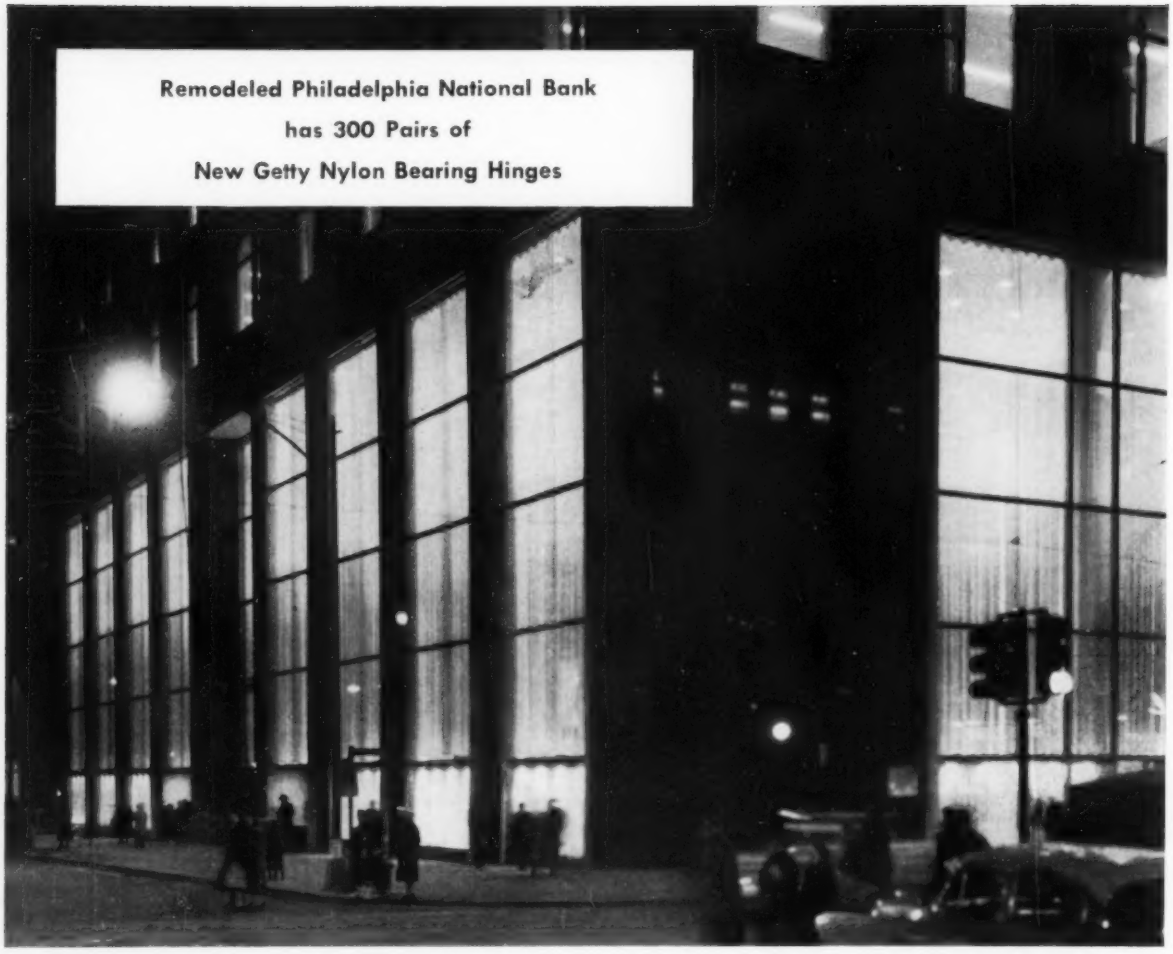
THE SOLUTION . . . Nine pendent mounted concentric ring luminaires (Silvray Lighting, Inc. Cat. No. 1500S/3R/5) using 500-w PS-40 inside-frosted silvered-bowl lamps were suspended 24″ overall, mounted 9′ on centers. Average general illumination two months after installation at desk top height measured 52 footcandles.

BRIGHTNESS RESULTS

LUMINAIRE (at 45°) Maximum	650 ft-L		
CEILING—Maximum	130 ft-L	Minimum	26 ft-L
FRONT WALL (between rows of luminaires)	12 ft-L		
(opposite rows of luminaires)	15 ft-L		
TRIM	10 ft-L	DADO	6 ft-L
FLOOR	4 ft-L	CHALKBOARD	2 ft-L
DESK TOP	25 ft-L	WINDOW SHADES	15 ft-L

For Correct School Lighting its always...

SILVRAY LIGHTING, INC.
AND ASSOCIATED COMPANIES
OFFICE: RKO BLDG., RADIO CITY, NEW YORK



Architects: Harbeson-Hough-Livingston & Larson **Builder:** United Engineers & Constructors Inc **Hardware Contractor:** Supplee-Biddle-Steltz Co.

READ THESE GOOD REASONS WHY YOU CAN BANK ON GETTY QUALITY

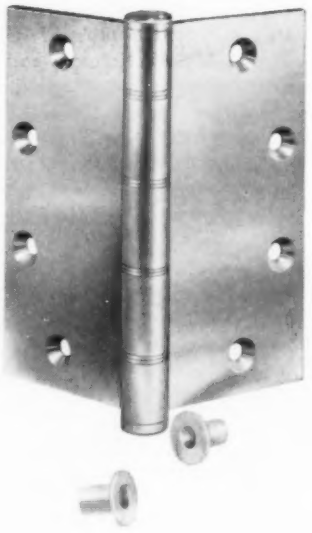
Recent remodeling has transformed this new headquarters of the Philadelphia National Bank into a completely modern building. For a small but important part of the job, the architects specified 300 pairs of Getty Nylon Bearing Hinges.

Getty Nylon Bearing Butts represent one of the most important improvements in hinge design in over 50 years. They let doors swing smoothly and freely. They last for years. They never need lubrication. And they're moderately priced.

The Getty Nylon Bearing Hinge is made of extruded bronze, brass or aluminum, except for the pin, which is stainless steel. The interior of the barrel is bushed in nylon, with the flanges acting as bearings. Because the bearing is thinner, there's more solid metal in the barrel and the hinge is much stronger.

The nylon bearings wear far longer than metal—never rust or corrode—are unaffected by weather. They save on upkeep because they never need lubrication. And they will not bind or squeak, even on little-used doors.

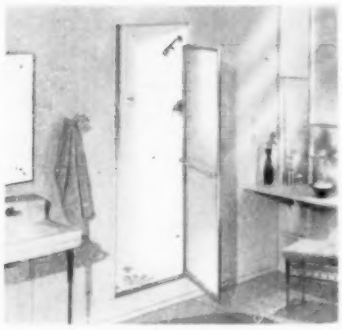
Getty Nylon Bearing Hinges are unquestionably the finest and most practical hinges you can recommend today—precision built for commercial, industrial, institutional or residential installation. You'll want the whole story. For complete details, including specification data, write H. S. Getty & Co. now.



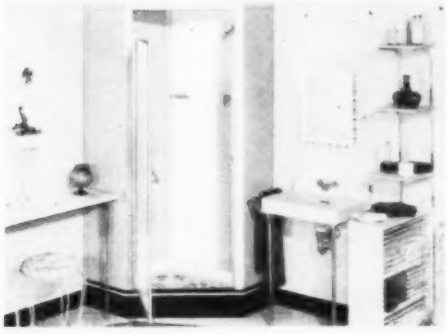
H. S. GETTY & CO., INC., 3348 NORTH 10th STREET • PHILADELPHIA 40, PA. • *Canadian representatives, A. N. Ormsby Co., 23 Scott St., Toronto*

WEIS

...the shower of many blessings, many styles



WEISWAY built-in cabinet showers are the ultimate in economical installations of this type. They eliminate the need of building a water-tight room because they are independent leakproof enclosures. Choice of 24 colors... vitreous porcelain or terrazzo receptor.



WEISWAY corner model cabinet showers save space, yet provide a roomy bath as well. They also are available as built-ins. Glass doors or curtains are optional with all Weisway cabinet showers. Choice of 24 colors ... vitreous porcelain or terrazzo receptor.

WEISWAY free-standing cabinet showers are also available in several models.

toilet compartments... for finest quality and low-cost maintenance

WEISART floor-braced style is especially popular for remodeling jobs, as well as new construction. Note clean lines for easy maintenance, and the absence of head rails. Rigid, sturdily constructed for years of trouble-free service. Choice of 24 oven-baked enamel colors. Brass hardware is chrome plated.

WEISART ceiling-hung style combines modern appearance with sanitation. No dirt-catching corners, no posts to interfere with floor maintenance. Completely rigid. Made to withstand use and abuse. Choice of 24 oven-baked enamel colors. Brass hardware is chrome plated.

OTHER TYPES also available. See catalog for specifications.

WEIS

toilet compartments and cabinet showers for schools, institutions, industry and home.

SEND FOR CATALOG

Fill in coupon and mail for further information about both Weisway cabinet showers and the full line of Weis toilet compartments.

HENRY WEIS MANUFACTURING COMPANY, INC.
5556 Oak Street, Elkhart, Indiana

Please send catalogs as indicated:

- ☐ Cabinet Shower Catalog No. 456
- ☐ Toilet Compartment Catalog No. 27

NAME_____

FIRM_____

ADDRESS_____

CITY, STATE_____

THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 362)

of all classrooms planned in the elementary systems.

And 21 per cent of all the programmed classrooms are in new secondary schools while 12 per cent are in additions, making a total of 33 per cent of all planned classrooms in secondary schools. Four per cent of the rooms would be in new combined elementary-secondary schools while 11 per cent would be in existing combined schools. This totals 15 per cent in the combined type of building.

Finally, the state reports indicated that only nine per cent of the elementary, one per cent of the secondary, and one per cent of the combined elementary secondary classrooms are planned for projects with one to six classrooms each. In the secondary schools, 78 per cent of all the proposed rooms are in projects with more than 20 rooms each and 64 per cent of the combined elementary-secondary classrooms are in projects with more than 20 rooms.

The Office of Education analysis shows that there were approximately 995,000 classrooms in school plants in use at the time of the 1954 survey. If the program is carried out as anticipated by the states, there would be 1,315,000 classrooms available in the United States by the fall of 1959.

MODULAR MEASURE ENDORSED FOR MILITARY CONSTRUCTION

Modular measure as a construction practice received one of its biggest boosts to date when the House Armed Service Committee wrote a new section into the military public works bill for next fiscal year encouraging its use in the huge military construction program.

The $2 billion bill, as it went to the House floor last month, contained this wording: "In the design of the family housing and other repetitive-type buildings in the continental United States authorized by this Act, the military departments shall, to the extent deemed practicable, use the principle of modular design in order that the facility may be built by conventional construction, on site fabrication or factory fabrication, whichever the successful bidder may elect."

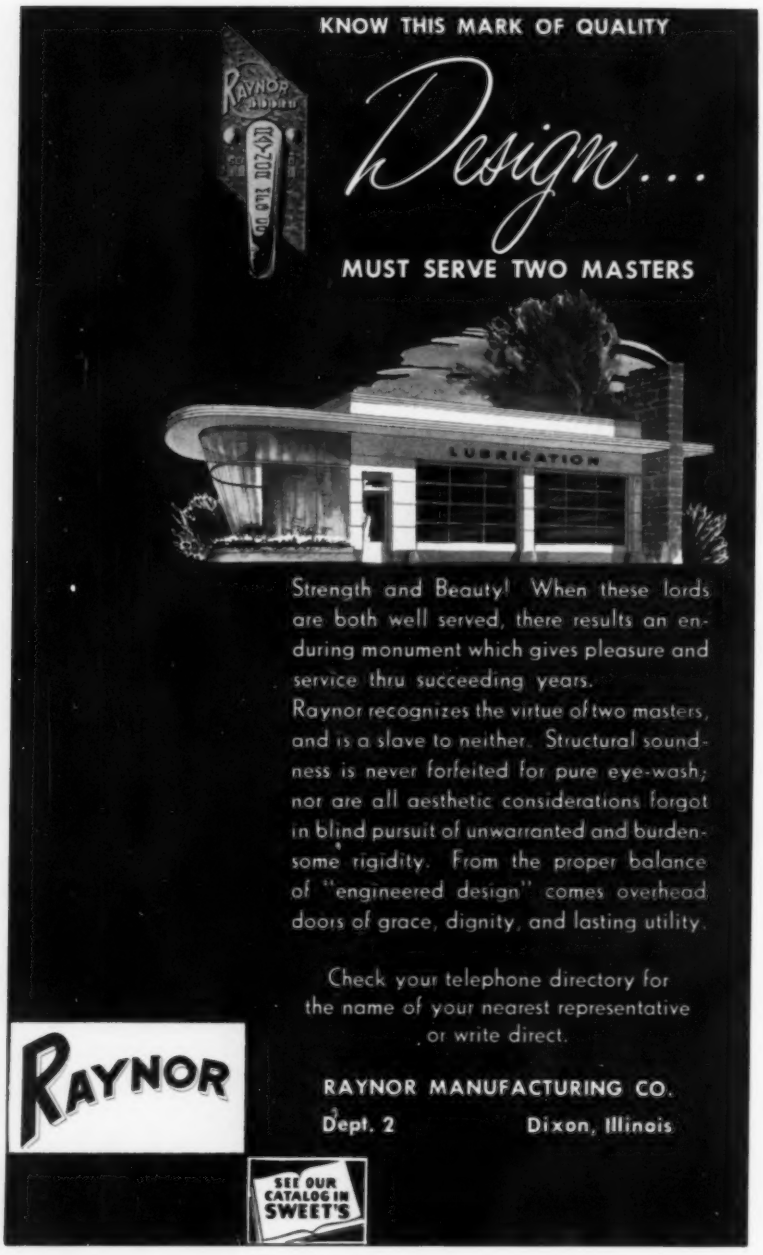
Explaining the inclusion of this new reference in a proposed public law, the committee noted that manufacturers of building materials are now changing to stock sizes that are multiples of four in. The most extensive conversions thus far have been in concrete block, wood and metal windows, brick, wallboards and insulations, flue linings, glass block, certain finish materials and related products, the committee's report said, adding: "This conversion has not been extended by all industries or all manufacturers of building materials but certainly the trend is in the right direction. These modular-size materials fit together with greater ease and efficiency when used in a building that has been planned for modular coordination."

The committee also noted that present experience with modular measure indicates that it can save millions of dollars per year in the cost of buildings for industrial, government and military use.

The first American standards on modular measure in buildings were published in 1945. The system has been "growing at rapid strides" since, according to the Congressional committee.

There was this further comment in the report: "Modular Colonial-type houses, modular Gothic churches, modular con-

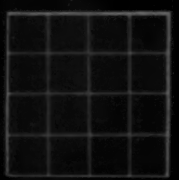
(Continued on page 370)


KNOW THIS MARK OF QUALITY
Design...
MUST SERVE TWO MASTERS
LUBRICATION
Strength and Beauty! When these lords are both well served, there results an enduring monument which gives pleasure and service thru succeeding years.
Raynor recognizes the virtue of two masters, and is a slave to neither. Structural soundness is never forfeited for pure eye-wash; nor are all aesthetic considerations forgot in blind pursuit of unwarranted and burdensome rigidity. From the proper balance of "engineered design" comes overhead doors of grace, dignity, and lasting utility.
Check your telephone directory for the name of your nearest representative or write direct.
RAYNOR MANUFACTURING CO.
Dept. 2 Dixon, Illinois
RAYNOR
SEE OUR CATALOG IN SWEET'S

David H. Horn, A.I.A. & Marshall D. Mortland, A.I.A., Architects. Fresno Marble & Tile Co., Tile Contractors.

MOSAIC *The only complete ceramic tile line from America's largest ceramic tile manufacturer*

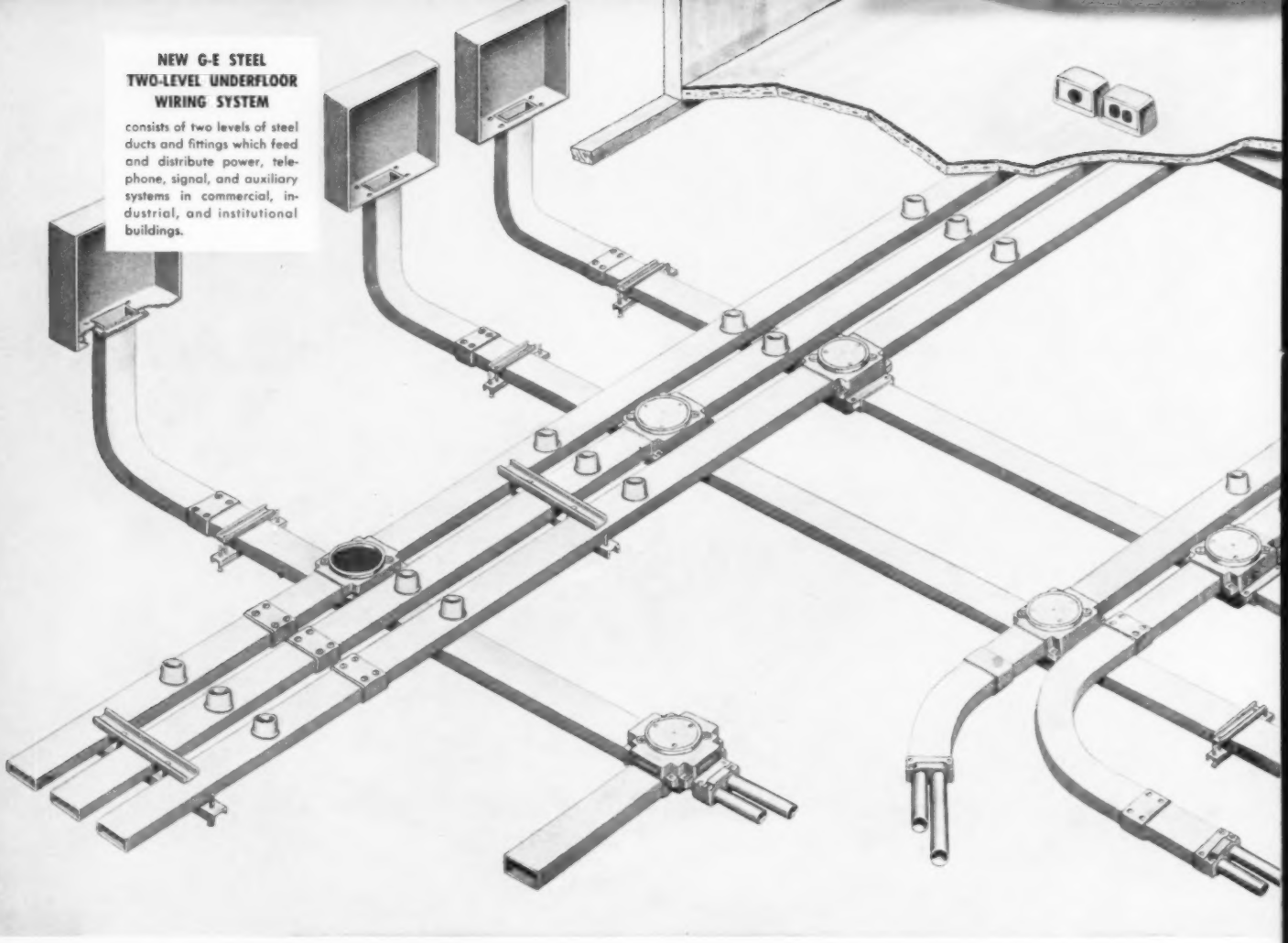
Ask your Mosaic Representative for helpful, informative Mosaic literature or write THE MOSAIC TILE COMPANY, Dept. 30-33, Zanesville, Ohio.



IMPERVIOUS ELECTRICALLY-CONDUCTIVE CERAMIC MOSAIC FLOOR TILE

GLAZED WALL TILE

Showrooms, Warehouses, Factories from Coast to Coast WAREHOUSES & SHOWROOMS: Atlanta, Baltimore, Boston, Chicago, Dallas, Denver, Detroit, Fresno, Greensboro, E. Hartford, Hempstead, Hollywood, Miami, Minneapolis, New Orleans, N. Hollywood, Philadelphia, Portland, Rosemead, Salt Lake City, San Diego, San Francisco, Seattle, Tampa, Washington, D.C. SHOWROOMS: Milwaukee, New York. OFFICES: Birmingham, Buffalo, Cincinnati, Kansas City, Oklahoma City, Pittsburgh. FACTORIES: Corona, El Segundo, Ironton, Jackson, Little Rock, Matawan, Zanesville.


NEW G-E STEEL
TWO-LEVEL UNDERFLOOR
WIRING SYSTEM
consists of two levels of steel ducts and fittings which feed and distribute power, telephone, signal, and auxiliary systems in commercial, industrial, and institutional buildings.

GENERAL ELECTRIC ANNOUNCES

New TWO-LEVEL steel underfloor wiring system

- **gives completely separate services**
- **permits unlimited number of duct feeds**
- **fits any predetermined floor layout**
- **allows unlimited number of services**

A new two-level steel underfloor wiring system offering entirely new benefits to architects, engineers, electrical contractors, owners, and tenants has been announced by General Electric.

COMPLETE SEPARATION OF SERVICES because only single-duct junction boxes are used. Duct entrances are on two levels—usually with feeder duct below and distribution duct above. This separation allows unobstructed runs and permits conductors to be pulled straight through the boxes. No crossunders or crossovers are necessary in the new General Electric two-level system.

FLEXIBILITY IN LAYOUT AND DESIGN is now possible because there are no limitations to the duct pattern in either the feeding or distribution portions of the two-level system. As many ducts as needed may be used.

ONLY ONE TYPE AND SIZE JUNCTION BOX TO INSTALL—contains no tunnels or barriers. Its entire interior is accessible for work and inspection. Wire pulling is easier and circuits are easy to trace because of two-level separation of all services.

INCREASED WIRING CAPACITY is provided for by the new steel duct (4-square inches cross-sectional area).

FIND OUT how this two-level system can help you distribute power, telephone, signal, and auxiliary systems. Get in touch with your nearest G-E Construction Materials District Office or write for information bulletin to Section C66-55, Construction Materials Division, General Electric Company, Bridgeport 2, Conn.

Progress Is Our Most Important Product

GENERAL ELECTRIC

CONDUIT PRODUCTS DEPARTMENT

GLASS-FIBERED PLASTER

Only Certain-teed gives you

WORKS CLEANER . . . FASTER . . . EASIER!

Now Certain-teed gives plasterers an entirely new kind of fibered gypsum plaster that helps them give you better plastering jobs at no added cost!

Bestwall glass-fibered plaster is a new patented formulation employing textile glass filaments cut to a carefully controlled length best suited for plastering. Plasterers who have field-tested it report new, higher standards of performance and on-the-job workability. In down-to-earth plasterer's language, this means:

- **TIME SAVED** . . . the glass fibers do not foul up mixer blades—or build up on the box, hoe or hod.
- **FASTER, EASIER PLASTERING** . . . no "balling" of fibers with consequent grooving of plaster; less backtracking and smoothing are required.
- **MORE UNIFORM SURFACE** . . . better base for finish coat.
- **BETTER KEYING** . . . uniform distribution of individual filaments of carefully controlled lengths, with 30 to 40 times as many fibers as any other fibered plaster produces better keying on metal and perforated lath . . . fewer plaster droppings.

Be sure to get complete details about the new Bestwall Gypsum Plaster. Write us today or call your Certain-teed salesman.

Certain-teed
REG. U.S. PAT. OFF.
Quality made Certain . . . Satisfaction Guaranteed

CERTAIN-TEED PRODUCTS CORPORATION
ARDMORE, PENNSYLVANIA
EXPORT DEPARTMENT: 100 EAST 42ND ST., NEW YORK 17, N.Y.
ASPHALT ROOFING • SHINGLES • SIDING • ASBESTOS CEMENT SHINGLES
GYPSUM PLASTER • LATH • WALLBOARD • SHEATHING • ROOF DECKS
FIBERGLAS BUILDING INSULATION • ROOF INSULATION • SIDING CUSHION
PAINT PRODUCTS—ALKYD • LATEX • CASEIN • TEXTURE • PRIMER-SEALER

ARCHITECTURAL RECORD is an active member of the Associated Business Publications which this year is celebrating its Golden Anniversary. We take this opportunity proudly to re-affirm our belief in the high publishing principles for which the Association stands and to assure our readers that we will ever "consider, first, the interests of the subscriber."

THIS WE BELIEVE

(*The ABP Code of Ethics*)

The publisher of a businesspaper should dedicate his best efforts to the cause of business and social service, and to this end each member of the Associated Business Publications pledges himself:

1. To consider, first, the interests of the subscriber.

2. To subscribe to and work for truth and honesty in all departments.

3. To endeavor to be a leader of thought in his editorial columns, and to make his criticisms constructive.

4. To encourage all constructive efforts to improve the standards and quality of advertising.

5. To avoid unfair competition.

6. To determine what is the highest and largest function of the field which he serves, and then to strive in every legitimate way to promote that function.

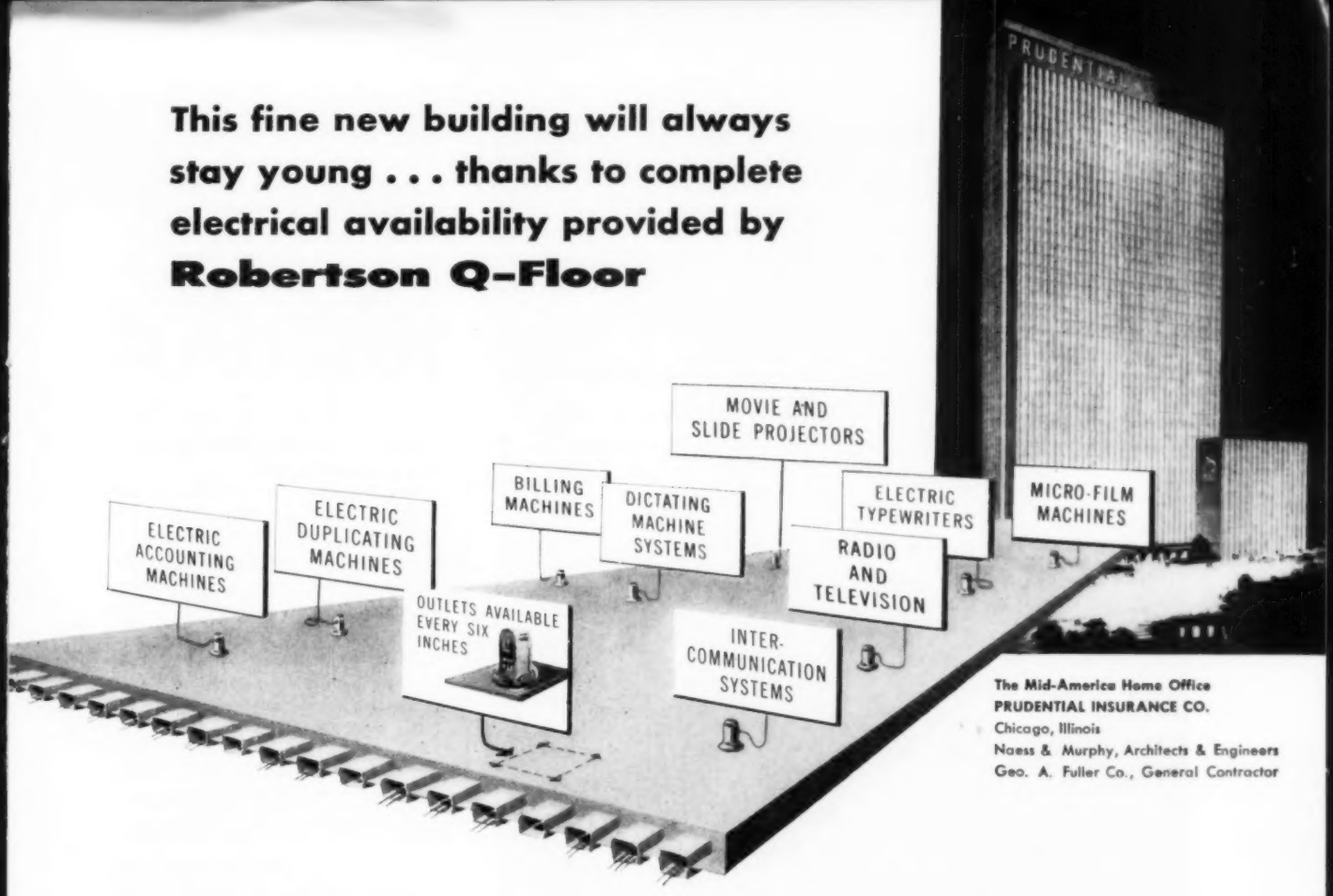
ABC | ABP

ARCHITECTURAL RECORD

"workbook of the active architect and engineer"

F. W. DODGE CORPORATION

This fine new building will always stay young . . . thanks to complete electrical availability provided by **Robertson Q-Floor**



The Mid-America Home Office
PRUDENTIAL INSURANCE CO.
Chicago, Illinois
Naess & Murphy, Architects & Engineers
Geo. A. Fuller Co., General Contractor

The new Mid-America Home Office of The Prudential Insurance Co. of America was designed with an eye toward the future. To meet the ever-increasing wiring requirements of modern electronic office equipment, architects Naess and Murphy prepared the structure to handle the highest electrical load of any office building ever built. To do this job easily and to permit power and telephone outlet changes and additions at minimum cost, Robertson Q-Floor construction was used.

By the use of this weight-saving, cellular steel structural floor, every exposed 6″ square area of the floor has become the potential location of a convenience outlet. Electrical engineering service on Q-Floor wiring is available through any of the General Electric Company's construction materials offices.

Robertson Q-Floor construction also saves construction time and money. Its weight-saving factor means lower cost of foundation and structural steel. It immediately becomes a safe storage and working platform for the benefit of all trades. And because no combustible forms and falsework are required for the concrete fill, there has never been a construction fire on a Q-Floor job. Add these features together and it's easy to see why so many fine new buildings are built with Robertson Q-Floor. Write for literature.

Today's finest buildings are built with **Robertson**

Q-Floor*

*the original cellular steel floor

H. H. Robertson Company

2404 Farmers Bank Building, Pittsburgh 22, Pa.
In England—Robertson-Thain, Ltd., Ellesmere Port, Cheshire
In Canada—Robertson-Irwin, Ltd., Hamilton, Ontario

Please send your latest Q-Floor literature.

NAME _____

COMPANY _____

ADDRESS _____

WASHINGTON TOPICS

(Continued from page 366)

temporary schools, hospitals and office buildings now exist throughout the country.

"The use of modular coordination is endorsed by such organizations as the American Standards Association, American Institute of Architects, Associated General Contractors of America, and is to be used extensively by architects and industry throughout the country. . . . The committee expects that substantial economies can be effected in many of the repetitive-type structures which constitute an important part of military construction. The insertion of this new section will serve as an encouragement to the department to permit as wide as possible usage of modular design consistent with the many other considerations involved in military construction."

Action on Military Housing

This same report indicated the committee feels that the military housing program is getting out of its control. The military department is providing housing for its personnel under two acts of Congress, one of which (Capehart Act) was not written by either House or Senate Armed Services groups. Both committees, it was felt, have a direct responsibility for such housing.

The question of overbuilding at military installations also was raised. The committee felt it was important that the military does not overprogram family housing with the result that the country as a whole might suffer.

The measure would authorize construction of 3740 family units costing $79.8 million. More than half would be constructed overseas. The Capehart Act, expiring in September if not renewed, contemplated approximately 50,000 family housing units privately financed with mortgages insured by the Federal Housing Administration. The White House has asked Congress to make this latter legislation permanent.

STATES AND CITIES BUDGET $248 MILLION FOR AIRPORTS

Civil Aeronautics Administration nipped rumors that applications for airport construction aid were not being received in anticipated volume. States and local municipalities, it said, have indicated in their applications to date that they plan to lay out $248 million in the next four fiscal years under the new Federal-aid program.

The money is represented in anticipated bond issues, state funds, donations, and money already in the local treasuries. Uncle Sam will put up $63 million for each of the next four fiscal years. One CAA official said requests for the Federal aid had never been less than twice the amount of money available.

CAA also would like to scotch the talk about airfield unpreparedness for the jet age. Decrying what it called the hysteria about the need for jet airports, the agency said that for one thing, the civilian jets won't be around until 1958 at the earliest, adding that except for a few facts, it already pretty well knows what the requirements will be. It yet needs to know the exact weight of jet aircraft, intended routes, and type of landing gear. Maximum runway length required will be approximately 9600 ft, it was estimated.

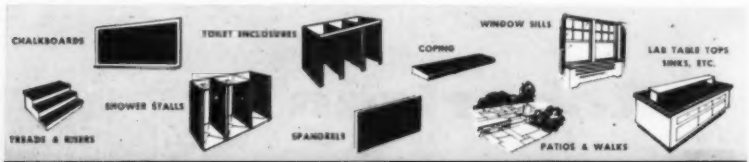
But a great problem is posed by airport facilities in which the architect has a greater interest. Jet planes will be

(Continued on page 374)

Slate Specified for Laboratory Installation at $3 Million Maine Township High School, Des Plaines, Illinois . . . Another Example Of Slate Installation In The Country's Leading Schools.

Architects: Childs & Smith, Chicago, Illinois.

Once confined to sinks and sink tops alone, slate has been extended in use to practically all laboratory furniture. Its resistance to chemicals . . . its non-absorptive qualities and tensile strength make slate equal . . . or superior . . . to all other products of similar usage. For durable laboratory installation . . . be sure . . . specify slate. Inquiries welcomed on specific properties of slate.

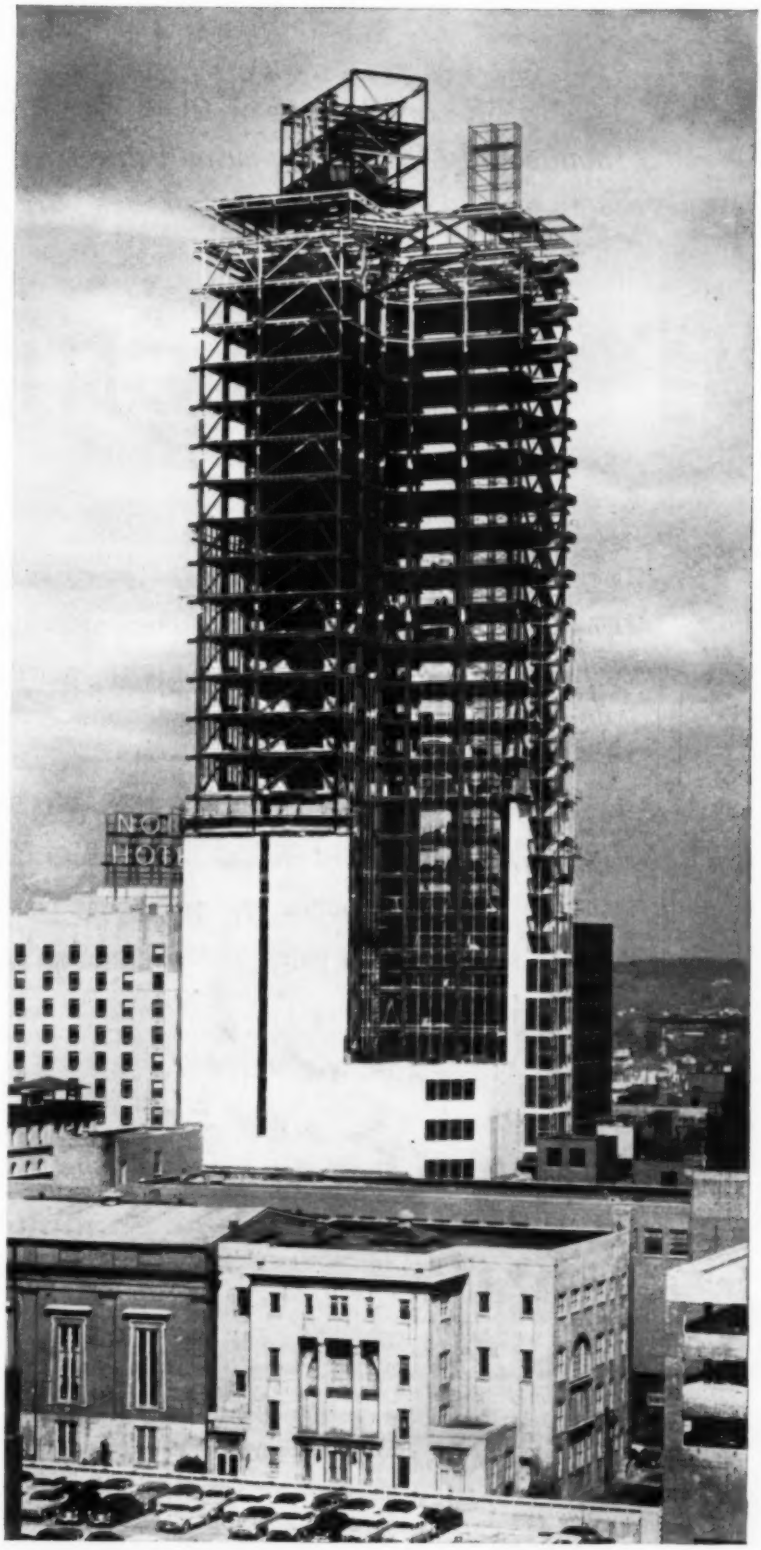


For Your Protection . . . Insist on Slate Quarried in Pennsylvania, U.S.A.

STRUCTURAL SLATE CO.
NATURAL SLATE BLACKBOARD CO.
PEN ARGYL PENNSYLVANIA

natural slate . . . 500 million years in the making

Newcomer to Nashville



Tall and slender stands the steel skeleton for the Life & Casualty Building, shown at right shortly after topping out by Bethlehem crews. Heralded as the Southeast's tallest building, the 30-story skyscraper is the new queen of the Nashville skyline.

Exterior walls will consist of gleaming metal and glass set off by masonry trim at the corners, and dramatized by a massive metal fin extending the entire 409-ft height of the building. Other features include electronically controlled high-speed elevators, a year-round air-conditioning system, and cellular steel floors. Life & Casualty Insurance Company of Tennessee, the owners, plan to use the building as their home office, leasing excess space to tenants.

The approximately 3350 tons of steel required for the job were fabricated and erected by Bethlehem, using high-strength structural bolts (in accordance with ASTM Spec. A-325) for all stressed field connections.

Architect: Edwin A. Keeble Associates, Inc.
Structural Engineer: Ross H. Bryan
General Contractor: J. A. Jones Construction Co.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM STEEL

BETHLEHEM STEEL

In "Record Houses of 1956," Architectural Record's bonus mid-May issue, you will find a striking demonstration of how typical "client-families" are benefiting from:

"ARCHITECTURE

George Bain Cummings, president, The American Institute of Architects, says, "This bonus issue might well have been entitled 'Architecture for the Good Life,' the theme of the 1956 convention of The American Institute of Architects. It so well illustrates our facet of that theme.

"We are delighted that *Architectural Record* is publishing this practical demonstration of the architect's professional usefulness in the home field. Here in this handsome and helpful edition the public may observe real evidence of easier, healthier, safer and more enjoyable living through architecture."

RECORD HOUSES OF 1956 will feature **4** major editorial sections:

1.

The American House. One house, selected by Record editors as a superb example of today's architectural design for a representative American family, becomes the scene of *the most complete editorial trip ever made through an American House as it is actually lived in.*

FOR THE GOOD LIFE"

2. **Twenty Architect-Designed Houses for Typical American Families.** A ninety-page, highly visual presentation of America's best new houses. Text covers the client's requirements, the architect's reasons for designing as he did, and an appraisal of the architect's work by the owner. Each house will be presented for easy comparison with all others in terms of design solutions to similar problems.

Criteria for the selection of featured houses include: (1) economical design in the $20–$50,000 price range, (2) three or four bedrooms, (3) facilities for growing children, (4) widespread geographical distribution, (5) functional excellence, (6) beauty of form, texture and color, (7) average sites, (8) design by 20 different architects — with full recognition of great new design talent along with the best known including . . .

Anshen & Allen; Bolton & Barnstone; Marcel Breuer; Curtis & Davis; Ulrich J. Franzen; Charles M. Goodman; John MacL. Johansen; A. Quincy Jones and Frederick E. Emmons; Allen & Edwin Kramer; Richard Neutra; Nims & Brown; John Pekruhn; Paul Rudolph; Schweikher & Elting; Smith & Williams; James Speyer; Paul Thiry; William Wiener; E. H. and M. K. Hunter; Wurster, Bernardi & Emmons.

3. **Nine Adventuresome Houses.** Examples of brilliant experimentation in design and the use of materials and equipment — pointing the direction to tomorrow.

In all, twenty-nine houses that will be a valuable tool for you to use with your clients to open their eyes (and minds) to good architectural design and to win their acceptance for house plans in which you can both take pride.

4. **Products and Literature.** A comprehensive round-up of *new* residential building products *plus* a listing of latest manufacturers' literature.

. . . . . .

Shortly after publication "Record Houses of 1956" will be available to the house building public in bookstores across the nation. For the first time it will give this public a truly embracive picture of the best in house design. "Record Houses of 1956" will make a significant contribution to the growing public awareness of the advantages of good house architecture — and the determination of the typical American family to enjoy them.

F. W. DODGE CORPORATION

119 West 40th Street
New York 18, N. Y.
OXford 5-3000

ARCHITECTURAL RECORD

"workbook of the *active* architect and engineer"

(Continued from page 370)

bringing in about 100 to 125 passengers. In many cases this will tax loading devices, administration buildings and terminal structures unless they are enlarged. The new Federal act, passed last year, authorizes aid for terminal buildings for the first time.

EXTREME PRESSURES SEEN AS CHALLENGE TO DESIGN

There are real problems begging for attention in the field of designing for extreme pressures — whether they be hurricane, atomic blast, or others, said Walter A. Taylor, director of education and research for the American Institute of Architects.

In remarks before the fourth annual meeting of the American Institute of Timber Construction in Washington, Mr. Taylor said, "The significant background fact here is that particularly with the atomic blast, the forces involved are so great that the classic structural theories of the static type, is applied to these forces, result in design which is prohibitive and self-defeating."

The technical problems also include those of fire resistance, of which he said, "There are still a good many architects around who are familiar with the old mill type of wood construction and remember that this was more fire resistant than metal structural framing."

Still another real problem which Mr. Taylor believes is denied sufficient attention is that of flame spread and the creation of noxious gases from certain types of paint or other surfacing materials. Despite these latent problems, however, he gave strong praise to the "remarkable advances" already achieved in timber construction.

The designers, he told the delegates, are concerned with the total impact of the created space and not simply the logic of structure. Under the heading of utilitarian demands or program requirements, he added, we may remind ourselves that there are not only new versions of traditional types of buildings such as churches and schools, but new types of buildings such as shopping centers, etc. All these present new opportunities in design and in the exploration of structural systems. Complexity of the occupancy use was described as a true challenge to the architect.

PREVENT LEAKS
IN CURTAIN WALLS
Tremco research, aided by representatives of leading glass manufacturers, has developed new glazing and sealing techniques for curtain wall construction.
You'll find these new specifications important to insure leak-free installations. Ask your Tremco Man for a copy of "NEW PRODUCTS AND METHODS FOR NEW GLAZING AND SEALING PROBLEMS," or write: The Tremco Manufacturing Company 8701 Kinsman Road, Cleveland 4, Ohio, or The Tremco Manufacturing Company (Canada) Limited, Leaside, Toronto, Ontario.
"When you specify a Tremco product —you specify a Tremco service!"
NEW PRODUCTS AND METHODS
TREMCO
PRODUCTS AND METHODS FOR BUILDING MAINTENANCE & CONSTRUCTION

NEW COUNCIL PROPOSED AS SPUR TO MODULAR MEASURE

The Joint Committee of the American Institute of Architects and the Producers' Council, Inc., was faced with a major decision on the future course for modular measure when William Demarest Jr., A.I.A. secretary for modular coordination, resigned this position to join the Technical Division and Research Institute of the National Association of Home Builders.

The Committee had before it a proposal (from Mr. Demarest) that a new non-profit American Construction Dimensioning Council be established to capitalize on the present increased interest in modular measure. The plan envisioned going straight to manufacturers for support, rather than continuing to rely on the trade association contributions. This system also would enlist the active support of a growing num-

(Continued on page 376)

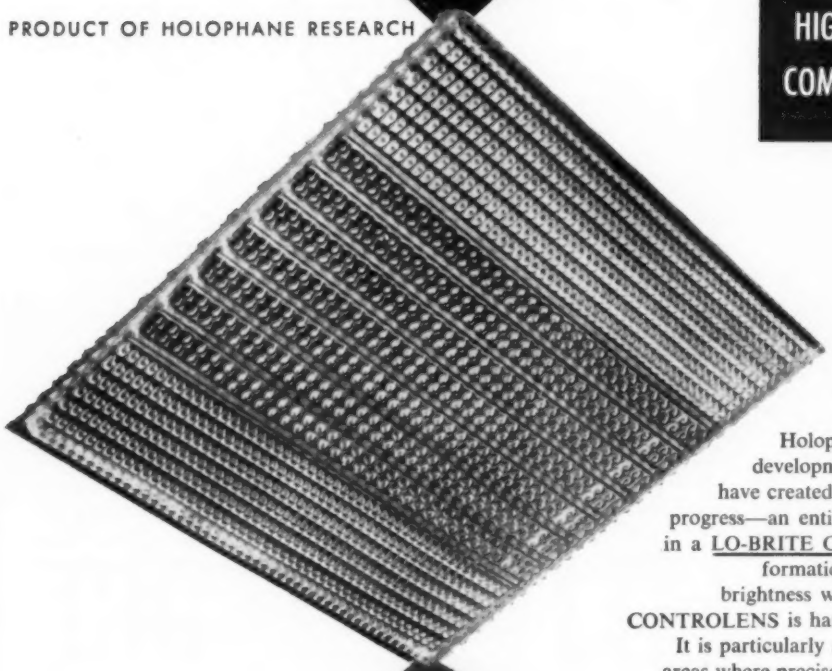
NEW 9026
by HOLOPHANE

PRODUCT OF HOLOPHANE RESEARCH

GREATER VISIBILITY

HIGHER COMFORT

EXTRA EFFICIENCY



LO-BRITE* CONTROLENS*

Holophane engineers, pioneers in the development of lenses for illumination, have created another contribution to lighting progress—an entirely new prismatic construction in a LO-BRITE CONTROLENS . . . The unusual formation of the prisms provides lowest brightness with highest visual comfort. This CONTROLENS is hand pressed by skilled craftsmen. It is particularly adaptable to modern low-ceiling areas where precise control of light is so important; also highly effective for continuous runs . . . It is recommended for a wide variety of locations: offices, showrooms, stores, schools, libraries, laboratories and other modern installations . . . Write us for a list of lighting manufacturers who use the LO-BRITE CONTROLENS as part of their equipment.

*®

Holophane

For Better Lighting
BE SPECIFIC . . .

HOLOPHANE

HOLOPHANE COMPANY, Inc.
Lighting Authorities Since 1898
342 MADISON AVENUE, NEW YORK 17, N. Y.
The Holophane Co. Ltd., The Queensway, Toronto, Ont.

The pictorial of fine timber construction in PUBLIC, COMMERCIAL and INDUSTRIAL BUILDINGS using

TECO WEDGE-FIT CONNECTORS

The most efficient mechanical fastenings for wood yet developed — and the most economical.

THIS 24-PAGE BOOKLET illustrates the flexibility and economy of timber roof construction in STORES AND MARKETS having spans from 50′ to 120′, and also shows its uses in FACTORIES, WAREHOUSES, Recreational Buildings, Garages, Hangars, Motels, Bridges, Towers, and other modern structures of wood, using Teco connectors.

Send today for this free booklet.

TIMBER ENGINEERING COMPANY AR-564
1319 18th Street, N.W.
Washington 6. D. C.

Please send FREE Pictorial, "Specify Timber with the TECO System."

Name.....

Firm.....

Address.....

Clyt, Zone, State.....

THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 374)

ber of persons who are embracing the modular measure principle — architects, contractors and others who have had no way of actively supporting the method.

Principal purpose of such a Council would be to support technical studies needed to extend modular measure applications as promulgated by the American Standards Association Project A62.

Further than this, such a Council could encourage the indoctrination of students and trainees in modular and other advance dimensioning methods. Exchange of information would be another desirable result.

It was suggested, too, that such an organization, affiliated with the British Modular Society, might broaden its interests to include all aspects of dimensioning in building. This could embrace drafting and surveying, construction tolerances, anthropometric bases for building dimensions, shop-drawing procedures, design-modules, preferred dimensions, etc.

BUILDING RESEARCH OUTLOOK DISCUSSED BY BRI OFFICIAL

The three building types due to receive the greatest research attention in the immediate future are houses, hospitals and schools, in the opinion of William H. Scheick, executive director of the Building Research Institute.

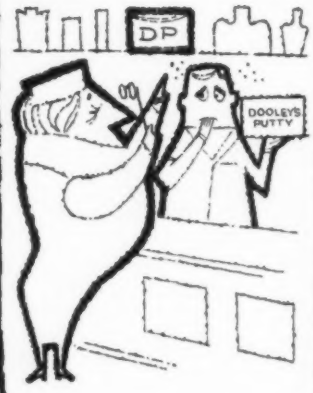
Both government and industry will be interested in stimulating research in all phases of building technology relating to these three prevalent building types, he said.

The National Association of Home Builders can be expected to continue to develop its research program directly concerned with housing. Mr. Scheick believes that the American Institute of Architects "may gradually develop research activity, with special reference to hospitals and schools, and still other building types."

Furthermore, the BRI executive predicted that there will be a great competitive battle for the exterior skins of buildings involving the masonry industry, ferrous and non-ferrous metals industries, the glass industry, and the porcelain industry.

He added: "I think it certain that the plastics industry will find many uses for

(Continued on page 378)



I distinctly said DP young man—not Dooley's Putty!

Mrs. de Puyster at the store counter . . . the architect . . . the builder . . . the window manufacturer — **everybody** knows **D-P** putties and caulking, glazing, and sealing compounds are the **best** on the market! For 89 years, **D-P** products have led the field in quality and performance. Learn more about them—write for catalogs.

DP

The Complete Line
CAULKING COMPOUNDS
CARTRIDGES & GUNS
GLAZING COMPOUNDS
SEALING COMPOUNDS
PUTTIES • MASTICS
GLAZING STRIP
ROPE CAULK

Preferred by Millions

D-P products are nationally advertised in Family Handyman, Grit, Homecraft, Home Craftsman, House Beautiful's Building Manual, Mechanix Illustrated, Popular Mechanics, Popular Science, etc.

INSIST ON D-P BEST SINCE 1867

DP556

DICKS-PONTIUS
THE DICKS-PONTIUS COMPANY
5302 Huberville Ave., Dayton 3, Ohio
Alexandria, Va. - Dallas, Tex. - Decatur, Ga.

BIG INCH OR LITTLE INCH

Economy because of quality can be yours with POLYKEN Protective Tape Coatings

HOW IS THIS POSSIBLE? When you specify high-quality *Polyken*, you *automatically* specify *low-cost application* as well as long-range protection.

More and more pipeline operators are realizing the unsurpassed qualities of modern polyethylene as a corrosion resister . . . and that the best need cost no more.

Factory controlled production from controlled materials—the source of quality—is likewise the source of low-cost field application.

By transferring your coating production *to our plant*, you get:

1. *Polyken* "Controlled Strength"—careful control in the selection and mass processing of raw materials to assure you "all work—no waste";
2. Uniform composition, thickness and adhesion;
3. Application right from the roll—little handling, no heat, no thinners, no solvents, no drying, no cooling, no clean-up time required;
4. High-speed, low-labor power taping for "big inch" as well as "little inch" installations;
5. Lowest equipment investment and manpower costs.

We can't figure your costs here in dollars and cents. But show us your plans—and we suspect you'll be surprised at how little this method costs you.

Let's talk it over now. Write, wire or phone today. The Kendall Company, Polyken Sales Division, Department AR-E, 222 West Adams Street, Chicago 6, Illinois (Randolph 6-4250).

Complete catalog, Sweet's Industrial Construction File, Sec. 9c/Ke

Polyken®

CONTROLLED STRENGTH

PROTECTIVE COATINGS

THE KENDALL CO., POLYKEN SALES DIVISION

Here's the New Guide

to water cooler selection

Just off the presses for immediate distribution is Cordley's easy four-step approach to the facts about water cooler selection. It eliminates all guesswork when purchasing water coolers. All the important questions are clearly and concisely answered for the man who specifies.

SOME COOLER QUERIES ANSWERED ARE:

Type required?
Kind needed for different conditions?
Capacity necessary?
Model most suitable?
How many coolers will satisfy?
Cooler location?

All these questions and others are objectively considered in our booklet "HOW TO SELECT A WATER COOLER"—guaranteed to save you plenty—yet costs you not a penny. SEND FOR IT TODAY.

CORDLEY & HAYES
443 Fourth Avenue
New York 16, N. Y.
Since 1889 . . . First in Water Coolers . . . Over 1,000,000 Sold

THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 376)

its many products in the building industry through research. The plastics industry and the chemical industry are practically synonymous, and the chemical industry is expert in this respect. At least five major plastics producers now have special technologists devoting all their attention to the development of new materials for the building industry."

Mr. Scheick's remarks on the future of building science were given before a recent meeting of the American Institute of Timber Construction.

Some shortcomings in the research field were noted. Mr. Scheick said that while individual manufacturers of building materials are concerning themselves with research and development, a great weakness is that most of the products are relatively small pieces of the building structure, and it seems very difficult to bring together people who should be working on combinations of materials in large building components.

Building research has lagged behind in the past in the fields of structural design and engineering, he continued. He urged his listeners to expand their thinking in terms of complete building structures and in terms of major building components and the uses of their basic material with other materials and products.

The trend in building technology is more and more toward the prefabrication of large building components, and these of necessity are combinations of various materials, Scheick asserted.

He held that the Federal government, as the largest owner and operator of buildings, has had inadequate links between its maintenance and its design operations. Management and operation of buildings completes the cycle of building production, he stated. "Here in the building itself as an actual testing laboratory the results of all previous research become evident. Only in a very few situations have there been any purposeful methods for gathering and analyzing this highly valuable performance data and reporting it back to industry."

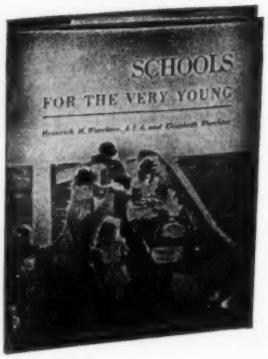
VA TIGHTENS CONTROL OF GI BUILDING COMPLIANCE

The Veterans Administration is naming analysts to check on inspectors.

(Continued on page 380)

Schools for the Very Young

by HEINRICH H. WAECHTER, A.I.A.
and ELISABETH WAECHTER



THOUGH many volumes have been written about school design, "Schools for the Very Young" is — so far as we know — the first in which an architect and a child educator have collaborated to provide an up-to-date treatise on the requirements of the particular type of school demanded for the proper training of the very young child.

Beginning with a brief yet adequate historical and philosophical background, in which the development of the theory and practice of child education is discussed, the book goes on to describe the pre-school in action, noting the events of the school day and the corresponding environmental needs of the children and their teachers. Examples of existing pre-schools are presented with the critical comment. Detailed information is given concerning the space apportionments and arrangements called for by the activities peculiar to such institutions. Since one of the authors is especially concerned with city planning, the relation of the pre-school to its neighborhood and community is analyzed, and the many different types of pre-schools that have developed to meet special conditions are enumerated and explained.

The outdoor space and its proper equipment are thoroughly covered from the standpoint of a capable architect who has given much thought to the problem. Technological problems of construction, lighting, ventilation, mechanical equipment, etc., are scrutinized in the light of the most recent practice. A wealth of illustrations add both interest and information, and a selective bibliography will aid further study.

208 pages, 7⅛ x 10, stiff binding. Price $6.50.

Book Department, F. W. Dodge Corp.
119 West 40th Street, New York 18, N.Y.

Enclosed is $.....for.....copy(s) of "Schools for the Very Young" by Heinrich H. and Elisabeth Waechter at $6.50 per copy. (Add 20¢ for N.Y.C. delivery — $6.70.)

Name.....

Address.....

City.....
Zone *State*

930

Overly hollow metal

goes into another outstanding building

The Price Tower, combining offices and apartments, captures the view of over 800 square miles of rolling country around Bartlesville, Oklahoma. ● *Overly takes great pride in the part its Hollow Metal Doors and Frames are playing in this triumph of architectural integrity.* ● *Thirty-six years ago, Frank Lloyd Wright envisioned a tree-like structure with floors cantilevered from a central stem of elevators and services. Today that vision—given substance with steel, concrete, copper and glass—soars 221 feet into the sky above the prairie town. General Contractor: Culwell Construction Company, Oklahoma City. Overly Sales Representative: Scovil & Sublett, Oklahoma City.* ● *For Hollow Metal details and specifications, send today for our Door and Frame Catalog Number 16B-OV.*

OVERLY MANUFACTURING COMPANY
GREENSBURG, PENNSYLVANIA
LOS ANGELES 39, CALIFORNIA

METAL PRODUCTS SINCE 1868

Photo by Joe D. Price

Elastizell
... the perfect answer to the residential slab-on-grade problem!

Parquet wood flooring on Elastizell-type concrete slab

Concrete made with this material is ...

- HIGHLY MOISTURE-RESISTANT

Elastizell-type slab is dry. On it can be used any kind of floor covering—cork or rubber tile, linoleum, parquet-type wood flooring, wall-to-wall carpeting!

- SELF-INSULATING

Elastizell-type slab, with its "warm-to-the-touch" feel, permits maximum performance of whatever the heating system. Hence, floor-to-ceiling living comfort!

AMONG OTHER USES OF ELASTIZELL-TYPE CONCRETE ...

- as light weight, easy-to-handle floor fills in multi-storied construction.
- as light weight, insulating roof fills.
- as light weight structural members.
- as insulation for underground pipe lines.
- as precast slabs and panels.

Write, wire or phone ...

ELASTIZELL CORPORATION OF AMERICA
158 FLETCHER STREET • ALPENA, MICHIGAN
'PHONE 1080

THE RECORD REPORTS

WASHINGTON TOPICS

(Continued from page 378)

The agency instructed each regional office manager to appoint a qualified VA construction analyst to make sure fee compliance inspectors carry out their assignments.

The duty of the fee inspectors is to see that builders of GI homes are conforming to plans and specifications and VA minimum property requirements.

The analysts make on-site inspections, report on all aspects of performance by the compliance inspectors, determine and report adequacy and quality of exhibits against which each inspector measures the degree of compliance and the quality of as-built construction at various stages, and evaluate adequacy and effectiveness of supervision by the builder in each particular case.

VA's MPR's are the same as those of Federal Housing Administration. The compliance inspectors are private contractors hired to inspect construction under the GI home loan program.

31 PLANNING PROJECTS GET URBAN RENEWAL ASSISTANCE

Requests for Federal aid for local urban planning under the Housing Act of 1954 now have passed the million dollar mark.

Urban Renewal Commissioners James W. Follin noted the significant fact is that agencies requesting the aid have pledged an equal amount of their own money in matching funds.

More than $2 million worth or urban planning work is therefore under way or projected under the Federal-state-local partnership provided in the Act, Mr. Follin observed.

URA totals in mid-March showed planning grants amounting to $606,226 approved, and applications on hand for an additional $471,359. Of the program's 31 separate urban planning projects, 13 represent planning assistance to 137 small municipalities by state planning agencies; 14 provide direct assistance to metropolitan and regional planning agencies in 10 states, and the other four are for regional planning by state planning agencies. URA expects that more applications, totaling more than $2 million, will be submitted before June 30.

to free the spirit...

In the hands of the architect, man's need for a place to worship is fulfilled and expressed through countless new and dramatic church designs. An important concept in the design of contemporary religious structures is the increasing use of steel or aluminum framed sliding walls of glass. In churches everywhere, in all climates and under all conditions, Arcadia sliding glass doors have become vital elements in interior, and exterior planning. Ask your Arcadia distributor for details. His name is in the Yellow Pages.

arcadia
sliding glass doors

ARCADIA METAL PRODUCTS • FULLERTON, CALIF.
Distributors in Canada, Puerto Rico & throughout the U.S. • Natl. member Producers' Council, Inc., & Natl. Assoc. of Home Builders.
Help build a better America ... See an architect

Gentle heat uniform, healthful

...yours from Modine –
first name in convector radiation

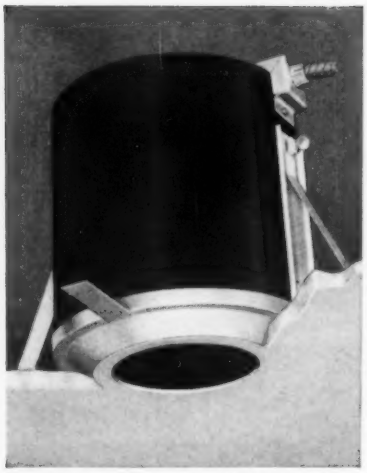
FOR those who want modern heating at its finest, there's only one answer — Modine convector radiation. Unmatched performance is combined with quiet beauty . . . long life with uniform, healthful heating. Exclusive features, like fingertip damper control, are further reasons why architects and engineers select Modine for their finer buildings.

You can choose from 30 types, 8000 sizes of Modine Convectors—deluxe, standard and institutional models—free-standing, fully and partially recessed. Call the Modine representative listed in your classified phone book, or write Modine Mfg. Co., 1510 DeKoven Ave., Racine, Wis.

Modine
CONVECTOR RADIATION

R-1304

In Canada: Sarco, Ltd., Toronto



Now!

NO VISIBLE TRIM
in kurt versen's
NEW Reflex!

This newest fixture simplifies the problem of maintaining an unbroken ceiling line.

- *no visible trim on ceiling*— a perfectly smooth ceiling, without special plastering or handling.
- *practically invisible light source*— dramatic lighting effects, at maximum efficiency.
- *baffled down-light* or adjustable beam models available for widest applications.
- *top or bottom servicing*— standard on all units, with maximum ease of replacing lamps.
- *all electrical work at one time*— cuts installation costs in half, because of kurt versen cost-reducing detachable yoke construction and no-frame* installation.

For the latest improvements in lighting design, always refer to kurt versen fixtures...they look better, work better, last longer.

kurt versen company
englewood, new jersey ' 5
contemporary lighting creatively engineered

*U.S. Patent 2,456,903; 2,614,785; other pats. pend.

THE RECORD REPORTS
WASHINGTON TOPICS

(Continued from page 380)

ADDENDA

In urging Congress to extend the legislation aiding Federally-impacted areas with their school building problems, U. S. Commissioner of Education Samuel Brownell said he had appointed a nine-member advisory group to determine whether it would be worthwhile to continue the program. He also wants to learn what changes should be made in existing legislation. The six-year-old law has covered Federal disbursements of $891 million to assist overburdened communities with their school construction problems. Commissioner Brownell asked for an authorization of $88 million for fiscal 1957 operations.

The Justice Department asked Congress for $17 million for design and construction of two new Federal prisons, locations to be determined. One would be a maximum custody building of the Alcatraz type for long-record criminals. The other would be a special youth training center to accommodate about 600. Prison population is expected to increase over the next few years, a witness on the subject told a House Appropriations subcommittee.

Uncle Sam owns $38 billion worth of real property scattered around the globe, including that in the United States. This is shown in a new inventory report worked up at the request of Congress by the General Services Administration. The value total is composed of $32.5 billion in the United States, $3.3 billion in territories and possessions, and $2.2 billion in foreign countries. Of the $38 billion figure, $21.1 billion, or 55.6 per cent, represents holdings of the Department of Defense and all military functions.

James F. Steiner was named manager of the Construction and Civic Development Department of the United States Chamber of Commerce, succeeding F. Stuart Fitzpatrick, department manager from April 1, 1928, until his recent death. The Steiner appointment was announced by Arch M. Booth, executive vice president of the Chamber. Mr. Steiner has been assistant manager and urban development specialist in the department since 1953.

Why do so many architects specify
SUMO
SUBMERSIBLES
for deep well water supply?

The answer is simple. A Sumo does a better job of meeting deep well requirements — and does it more economically and more efficiently.

- Operating completely inside the well, underwater, it's protected against freezing, fire, floods and vandalism — it's absolutely noiseless, too.
- It needs no pump house or pump pit.
- It's compact — fits the smallest wells.
- Its design — backed by over 30 years of submersible manufacturing experience — assures long trouble-free operation — simplified maintenance and servicing.

Serve your clients' best interests by specifying SUMO SUBMERSIBLES for their deep well water supply systems. They're available in a range of sizes and capacities for every domestic, commercial and industrial need from ⅓ HP thru 30 HP.

FACTS FOR YOU
Send for descriptive bulletins describing SUMO Submersible Pumps. Address Dept. 3

SUMO PUMPS INC.
Box 983, Stamford, Conn.

Sumo SUBMERSIBLE PUMPS
for Home • Farm • Industry

Versatile

PIONITE

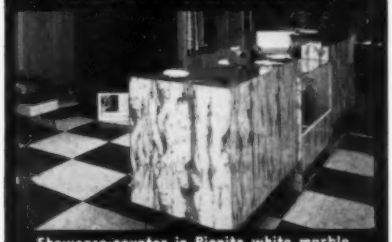
DECORATIVE PLASTIC LAMINATES

White Marble

Pionite white marble on desk and divider in office of City National Bank Bldg., Beverly Hills, Cal.

Modern columns surfaced with Pionite white marble at entrance of Hal's Ltd., Van Nuys, Cal.

Interior view shows Pionite white marble paneling from showcase to ceiling.



Showcase-counter in Pionite white marble.

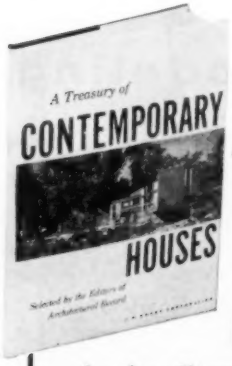
IT'S RIGHT IF MADE WITH PIONITE PLASTIC LAMINATES

In office or store - or on counters, cabinets and walls in the home, you'll find Pionite plastic laminates the perfect surfacing material. Pionite patterns faithfully reproduce the deep rich beauty of marble and woodgrains, or provide striking decorative effects. This work-free, lifelong surface requires practically no maintenance. First with forward-looking builders, contractors, and architects, Pionite has won nation-wide acceptance in over 4 million quality-minded homes and commercial establishments.

See the Pionite Display in the Architects Sample Room, 101 Park Ave., New York.

For complete information, write Distributors Sales Manager, Pioneer Plastics Corp., Salem, Mass.

Pioneer PLASTICS CORPORATION, Salem, Mass.



NEED GOOD HOUSE IDEAS?

you must see

A TREASURY OF CONTEMPORARY HOUSES

by the editors of *Architectural Record*

Fifty architect-designed houses selected from plans of hundreds of new homes, designed by some of the world's leading architects.

Each house is fully depicted in about 10 superb photographs and is complete with floor and plot plans, with some design details. Over 600 illustrations in all. New ideas in space utilization, floor layouts, room division, interior finishing, exterior treatments, built-ins, window and doorway styling, landscaping. 215 pages, 8¾ x 11⅓, $5.95.

Order today on 10-day approval

DEPT. 930

DODGE BOOKS

119 West 40th Street
New York 18, N. Y.

it's the draw-off that counts in grease interception

Josam Series "JH"
GREASE INTERCEPTOR

draws off intercepted grease *at the turn of a valve.*

Where grease interceptors are needed, be sure to select the one with the "draw-off valve". It's the draw-off that makes the difference — with it there's no cover to take off . . . no mess . . . no inconvenience . . . no oder in removing the grease as with other intercepting devices! With Josam Series "JH" Grease Interceptors, over 95% of the grease in the waste water is intercepted and drawn off into a storage container, merely at the turn of a valve. They should be installed wherever greasy wastes resulting from food preparation or processing can cause clogged drain lines, expensive repairs and shut-downs.

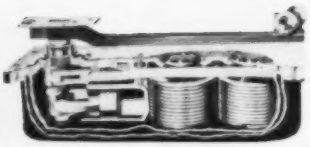
Get all the answers to grease and other waste problems by writing for free copy of Manual W.

JOSAM MANUFACTURING COMPANY

Dept. AR
MICHIGAN CITY, INDIANA

BOMMER

for the best in SPRING HINGES



DOUBLE-ACTING

CHECKING FLOOR HINGE

for the MODERN Glass Door

No. 86—Govt. Spec. FF-H-121A, Govt. Type 3510–1. Can also be used with wood or metal doors.

Write Today for Complete Catalog

a trademark since 1876

BOMMER

SPRING HINGE CO., INC.

157 Landrum Highway, Landrum, South Carolina

SALES OFFICES & WAREHOUSES

Brooklyn: 263 Classon Avenue

Chicago: 180 N. Wacker Drive

REQUIRED READING

(Continued from page 70)

liography (see AR, p. 48, May 1955) for the use of the architect who may be involved in city or regional planning are two reports on outstanding examples of what has been accomplished in two areas since the war. CAPITAL PROGRAM: CITY OF PHILADELPHIA outlines what has been thus far accomplished in the ambitious *redevelopment* program of this city, as well as what is projected for the next five years. It is an excellent and detailed report.

THE BRITISH NEW TOWNS POLICY by Lloyd Rodwin is a more scholarly assessment on the *development* of New Towns in the London area. In this book Mr. Rodwin explores the original garden city ideals of Ebenezer Howard and the evolution of these ideals into the New Towns policy of both the Labor and Conservative Governments. He discusses their adequacies and implications.

URBAN DEVELOPMENT GUIDEBOOK

By Thomas S. Holden

Urban Development Guidebook. Construction and Civic Development Department, Chamber of Commerce of the United States (Washington, D. C.) 1955. 102 pp, illus.

This is a practical primer aimed at assisting local Chambers of Commerce and other civic organizations to formulate and execute large-scale rehabilitation of problem areas in cities. It discusses ways and means of organizing a functioning urban development team, and assembling basic economic data on the community's problems and resources; it describes needed attributes of official community planning agencies and basic requirements of a general or master plan. It discusses the city's money problems and outlines available federal aids.

The text is straight forward, simple, practical, but at the same time maintains a sound balance between technical aspects of the rehabilitation problem and promotional methods for stimulating community action. Practical examples of urban development and planning in action are cited from the experiences of such cities as Dayton (Ohio), Birmingham (Ala.), Columbus (Ga.), Houston (Texas), Sacramento (Calif.), Worcester (Mass.), Pittsburgh (Penna.), Columbus (Ohio), Indianapolis (Ind.), and Toronto (Ont.).

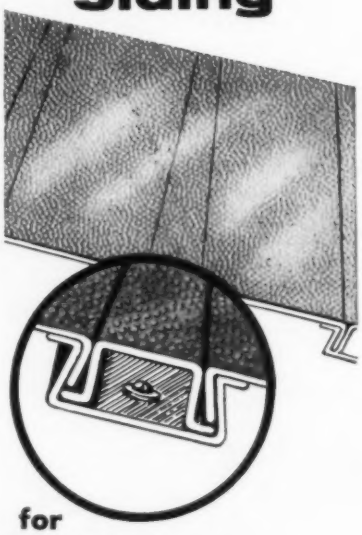
As a means of orienting interested persons in the urban rehabilitation

(Continued on page 388)

MicroRold®

Stainless Steel

No-Fastner® Siding



for Building Construction and Remodeling

PERMANENT CORROSION RESISTANT WALL requiring no maintenance.

LOW FABRICATION AND ERECTION COSTS through unique design.

VARIOUS ARCHITECTURAL EFFECTS may be achieved through a multitude of stainless finishes and textures.

LOW PRICE cost less than other materials, such as aluminum, porcelainized steel and brick facing in that they do not offer as many advantages as stainless steel.

Write Today for our Descriptive "NO-FASTNER" FOLDER

Washington Steel Corporation

5-R Woodland Ave.
Washington, Pa.

BRIGHT IDEA! COMBINE LIGHT FIXTURES WITH KNO-DRAFT AIR DIFFUSERS

Shown is the two-story main lounge of Men's Residence Hall at the University of Washington, Seattle. Regular Kno-Draft Air Diffusers with pendant light fixture adaptations are used to achieve design simplicity and assure an uncluttered ceiling.

Kno-Draft Air Diffusers also offer the advantage of complete adjustability *after* installation. This assures *uniform temperature without drafts* throughout the conditioned area, and saves considerable preliminary slide-rule figuring.

There are Kno-Draft round, square and slotted units to meet all architectural and engineering requirements—the industry's most complete line of engineered air diffusers. Attach coupon to your letterhead and mail today for full information. Connor Engineering Corporation, Danbury, Connecticut.

CONNOR ENGINEERING CORPORATION

kno·draft®
adjustable air diffusers

Young, Richardson, Carleton & Detlie, Architects and Engineers

Connor Engineering Corp., Dept. E-56, Danbury, Conn.

Please send data on Kno-Draft Air Diffusers. I am particularly interested in: ☐ round ☐ square ☐ slotted ☐ light fixture adaptability ☐ high pressure systems.

Name_____

Company_____

Address_____

City_____ Zone____ State____

Design 5162

CUTLER

A CUTLER MAIL CHUTE should be specified for every eligible office building, public building, hotel, apartment and hospital.

•

Cutler Mail Chute Equipment is also being installed in dormitory, administration and classroom buildings for many schools.

•

Catalog in Sweet's

ESTABLISHED 1885
Cutler Mail Chute Co
ROCHESTER 7, N.Y.

FOR YOUR PROTECTION

insist on

Quality Approved

ALUMINUM

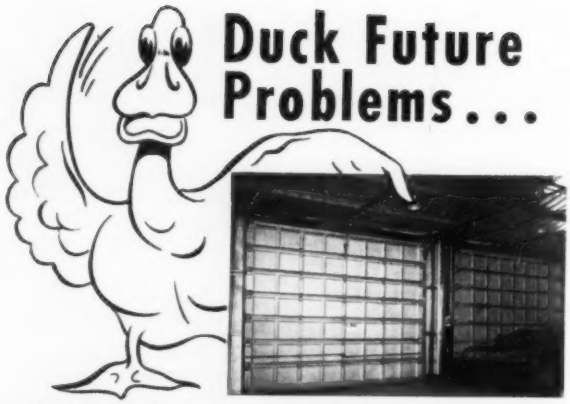
DOUBLE-HUNG CASEMENT PROJECTED AWNING

WINDOWS

Lower maintenance costs, no painting, easy operation, years of trouble-free service . . . these are a few of the benefits your clients get with "Quality-Approved" aluminum windows . . . windows that have been tested for quality, strength, construction and minimum air infiltration.

For detailed specifications and names of manufacturers, consult Sweet's 17a/ALU or write direct to

ALUMINUM WINDOW MANUFACTURERS ASSOCIATION
75 West Street, New York 6, N. Y.

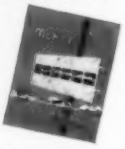


Duck Future Problems...

BY INSISTING ON THE QUALITY

McKee OVERDOOR

McKee Industrial Overdoors because of their advanced engineering features and quality construction assure years of trouble-free operation. Unlike many other makes of Overdoors which embody light "residential type" materials, McKee Industrial Overdoors are built specifically for industrial use. Nothing will beat a McKee Overdoor for long range economy.



Bulletin on McKee Overdoors is yours on request. Write for it TODAY!

McKee Door Company

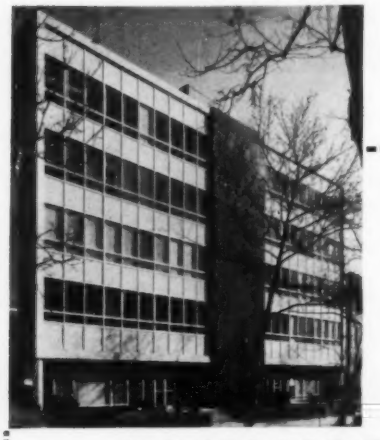
Main Office and Factory
100 Hermes St. • Aurora, Illinois
In Canada: McKee Door of Canada, Ltd.
14 Jutland Road, Toronto, Ontario

OVERDOORS McKEE TRADE MARK OPERATORS

You need data on lighting problems that is complete, yet concise and easy to use. Kayline's Engineered Lighting Handbook No. 55 will save you valuable time on specifying the lighting for all commercial and industrial jobs you do.

Send for a copy for yourself and your specifications writer today. Use a post card or simply attach this advertisement to your letterhead. The Kayline 74 page Engineered Lighting Handbook No. 55 contains charts and information on footcandles of light, light patterns, installation suggestions and other valuable information to make your job easier. Send for it today!

THE KAYLINE COMPANY
Dept. AR • 2480 EAST 22ND STREET • CLEVELAND 15, OHIO
engineered lighting
SINCE 1895



Chargrove Realty, Baltimore, Md.

Architects: Bonnett & Brandt

Installed by Southern Plate Glass Company

ALUMILINE

EXTRUDED ALUMILITED* ALUMINUM PRODUCTS

Specified by Leading Architects for:

HOSPITALS • SCHOOLS • RELIGIOUS BUILDINGS • BANKS
STORE FRONTS • OFFICE BUILDINGS • INDUSTRIAL PLANTS
HOUSING PROJECTS • SHOPPING CENTERS

Also Furnished in the New, Non-Fading GOLD LITE, BLACK LITE, BLUE LITE, and AQUA LITE

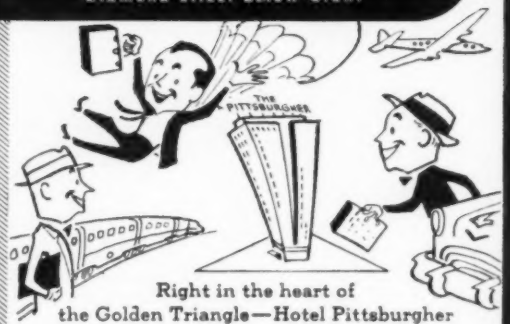
Send for these Catalogs "Alumiline" Store Front Construction and "Alumiline" Entrances and Doors

see our catalog in ARCHITECTURAL FILE or write for copy

THE ALUMILINE CORPORATION
DUNNELL LANE PAWTUCKET, R. I.
• Trade Name Aluminum Company of America

Handiest Locations in PITTSBURGH

Hotel Pittsburgher
PITTSBURGH, PA.
Diamond Street below Grant



Right in the heart of the Golden Triangle—Hotel Pittsburgher

400 outside rooms with bath. Large-screen television and radio at no extra charge in every room. Air conditioning. Two restaurants. *ATlantic 1-6970*

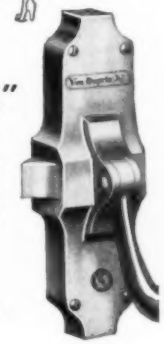
Hotel Pittsburgher MOTEL

Opposite Greater Pittsburgh Airport on Airport Parkway west. 56 air-conditioned rooms with large-screen television at no extra charge, tile bath, private phone. Courtesy car to and from motel. *AMherst 4-5152*

a Knott Hotel

JOSEPH F. DUDDY, GEN. MGR.

Von Duprin
Fire and Panic
EXIT DEVICES



"THE SAFE WAY OUT!"

● Since originating the fire and panic exit device in 1908, Von Duprin has consistently pioneered advances in design, use of new materials and a line of auxiliary items to provide "safe exit" for any building, any condition.

VONNEGUT HARDWARE CO.
VON DUPRIN DIVISION • INDIANAPOLIS, INDIANA

they all know the best place in Cleveland

"Hotel Cleveland, sir?"

Whether you arrive by train, plane or car, the friendliest place to stay is Hotel Cleveland, in the heart of the city . . . directly connected with Union Passenger Terminal.

Hotel Cleveland

NO ROOM CHARGE FOR CHILDREN UNDER 14 WHEN REGISTERED WITH AN ADULT.

SONNABEND OPERATED HOTELS
Distinguished American Landmarks
CHICAGO: Edgewater Beach Hotel
BOSTON: Hotel Somerset
NEW YORK CITY: Ritz Tower Hotel
CLEVELAND: Hotel Cleveland

Use time-tested Transite for venting gas-burning appliances

New booklet shows how *it provides freedom of design*

A new extensively illustrated booklet gives you many good reasons why Transite® Gas Vent Pipe enjoys the wide acceptance of architects.

In 28 fact-filled pages you will find detailed information about the entire line of Transite asbestos-cement Gas Vent products, together with their installation and performance advantages. Photographs show simplicity of pipe assembly. Centerline dimensions make layouts easy to "rough-in." Diagrams provide helpful hints on supporting and bracing. Cross-sectional drawings on all Transite fittings give design data. Chart illustrates ease of following rules of good venting. Complete tables give sizes, weights and dimensions. Send the coupon for your copy today.

Other Transite Pipes for the Home
Building Sewer Pipe • Plumbing Vent Pipe
Warm Air Duct

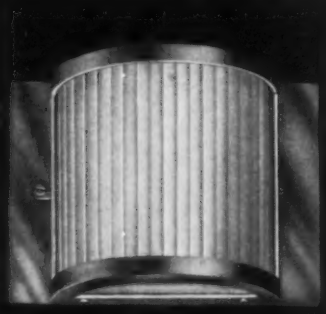
Johns-Manville
TRANSITE GAS VENT PIPE
an asbestos-cement product

JM

Johns-Manville, Box 60, N.Y.
Please send me your new booklet TR-119A, "Transite Gas Vent Pipe."

Name_____
Company_____
Street address_____
City_____ Zone_____ State_____

design by mc Philben



An Exterior Wall Bracket—4-50

Here's durability and performance . . . in a distinctive modern design

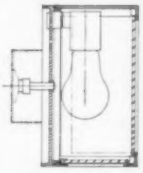
Striking in its simplicity . . . designed for long-lasting, all-weather protection . . . maximum efficiency, wherever lighting fixtures take a beating.

IT'S MADE OF heavy die-cast aluminum throughout . . . satin-finished . . . anodized for protection against sun, rain, dampness.

THE UNIT INCLUDES a medium base twin porcelain lamp holder for one 150-Watt inside-frosted lamp and Flutex curved glass diffusers. The assembly is simple . . . a hinged door frame secured to a back plate with a captive held screw.

APPLICATIONS COVER . . . schools, hospitals, libraries, railway and bus stations, factories, public and office buildings . . . all institutions!

FOR OTHER WALL BRACKETS in exterior line, write for data on . . . the "4 line". DIMENSIONS—(4-50) 8" high, 11" wide, with a 4¾" projection from the wall.



1337 Willoughby Avenue, Brooklyn 37, N. Y.

CONSULT mc Philben Lighting SPECIFY

Representatives in major cities
Stocked By Electrical Wholesalers

REQUIRED READING

(Continued from page 384)

problem and of directing rehabilitation planning along practical lines, the GUIDEBOOK should be an invaluable aid to project organizers, civic communities and planning bodies.

BIBLIOGRAPHY

A Business Man Looks at Transit (pamphlet). By Boyd T. Barnard. Urban Land Institute (Washington, D. C.) Nov. 1955. 6 pp, illus.

Adventures of a Slum Fighter. By Charles Palmer. Tupper and Love Inc. (Atlanta, Ga.) 1955. 272 pp, illus. $4.

American Skyline. By Christopher Tunnard and Henry Hope Reed. Houghton Mifflin Co. (Boston, Mass.) 1955. 302 pp, illus. $5.

The British New Towns Policy. By Lloyd Rodwin. Harvard U. Press (Cambridge, Mass.) 1956. 252 pp, illus. $7.50.

Capital Program: City of Philadelphia, 1956–1961. Philadelphia City Planning Commission (Philadelphia, Pa.) 1955. 177 pp, illus.

Changing America: The Land as It Was and How Man Has Changed It. Photographs by Andreas Feininger, text by Patricia Dyett. Crown Publishers Inc., (419 Fourth Ave., N. Y. C.) 1955. 170 pp, illus. $5.95.

Church and City Planning: Suggestions for Coordination. Robert C. Hoover and Everett L. Perry. Bureau of Research and Survey Nat'l Council of the Churches of Christ in the U. S. A. (297 4th Ave., N. Y. C.) 1955. 36 pp, illus. 50¢.

Defending "The Hill" Against Metal Houses. William K. Muir Jr. University of Alabama Press (University, Ala.). Inter-University Case Series No. 26. 1955. 35 pp, illus. 50¢.

Forbidden Neighbors. By Charles Abrams. Harper & Bros. (New York) 1955. 404 pp, $5.

The Foreseeable Future. Sir George Thompson. Cambridge U. Press (New York) 1955. 166 pp, $2.50.

Land Uses in American Cities. Harland Bartholomew. Harvard U. Press (Cambridge, Mass.) 1955. 196 pp, illus. $6.50.

The Role of the Federal Government in Housing. By Paul Wendt. American Enterprise Assoc. (Washington, D. C.) 1955. 48 pp.

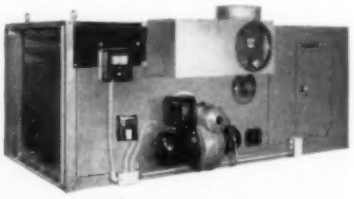
Transportation Problems in San Francisco (pamphlet). By Robert S. Nielson. (Vol. 15 *Urban Land.*) U. L. I. (Washington, D. C.) Feb. 1956. 10 pp, illus.

Utilities and Facilities for New Residential Development. Technical Bulletin No. 27. Urban Land Institute (Washington, D. C.) 1955. 100 pp, illus. $3.00.

What Will New Industry Mean to My Town: A Summary of Two Case Studies of the Impact of New Industry on Small Towns. U. S. Dept. of Commerce, Office of Technical Services. U. S. Gov't Printing Office. (Washington, D. C.) 1955. 19 pp, illus. 15¢.

(Continued on page 392)

4 big reasons for choosing J-C SUSPENDED FURNACES

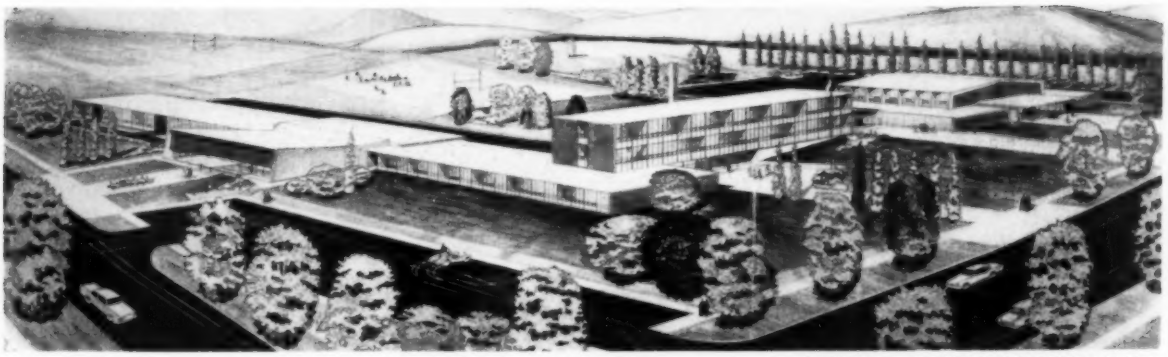


1. easy placement in out-of-the way locations
2. savings in valuable floor space
3. limitless zone heating possibilities
4. super-size for larger commercial and industrial use

And, of course, the biggest reason for choosing from the pioneer line of Jackson & Church suspended furnaces is that every J-C unit is carefully engineered for performance, economy and dependability. In outputs from 80,000 to 1,000,000 Btu!

J-C . . . America's Largest and Most Complete Warm Air Heating Line!

J-C JACKSON & CHURCH FURNACE DIVISION Saginaw, Michigan



Foss & Company, Fargo-Moorhead, North Dakota, Architects
Meisner-Anderson Company, Bismarck, North Dakota, Contractors

Striking Appearance! with ALUMINUM WINDOWS

Here is effective beauty in business buildings! **MARMET** Curtain Wall Windows system is fast becoming popular throughout the country . . . **MARMET** Curtain Wall Windows offer architects the unit with which new ideas and designs can be achieved, as illustrated in the above architect's sketch. Not only is it their striking appearance but simplicity of design that produces effective beauty. When you specify **MARMET** Aluminum Windows, you are sure of quality, service, reliability and satisfaction. **MARMET** offers ten window series whose features of design and construction contribute to the striking beauty of the finished installed windows. A complete line of aluminum windows for all types of construction:

- **Curtain Walls**
- **Projected Sash**
- **Church Windows**
- **Window Walls**
- **Ribbon Windows**
- **Casement Windows**
- **Custom Windows**
- **Custom Aluminum Entrances**

Full details on MARMET Aluminum Windows are shown in new MARMET Catalog that will be sent upon request. Write, wire or phone to

MARMET CORPORATION
OF
WAUSAU, WISCONSIN

MARMET
WAUSAU, WISCONSIN

. . . the most complete and exciting line of decorative clay tile available today. In 34 stock patterns, Ceratile gives new beauty and design to residential, commercial and institutional interiors . . . can be frostproofed for exterior use in freezing climates. For full information write to Dept. AR-56

THE CAMBRIDGE TILE MFG. CO.
Authorized Distributors of Ceratile
P. O. BOX 71, CINCINNATI 15, OHIO

You are specifying RELIABILITY when you select SIGNAL products

Fire Alarm Systems (Interior & Exterior)

Signal Devices

Code Call Systems

Write for Catalogs FSC-7

You can expect complete reliability from products engineered and manufactured by Signal Engineering & Mfg. Company, originators of A-C Fire Alarm Systems and the Underdome Bell. Some of the SIGNAL products of special interest to the building industry are:

- ★ **Interior Fire Alarm Systems (coded and non-coded types) complete with wall boxes, control panels and signal devices,**
- ★ **Single-stroke and vibrating bells in various sizes; chimes, cow bells and horns**
- ★ **Code Call Systems for instant communication with individuals away from desks or benches.**

Engineering Representatives In Principal Cities.

Signal Engineering & Mfg. Co., has changed its name to
Wheelock SIGNALS INC
LONG BRANCH, N. J.

Mail COUPON FOR FREE COMPLETE SPEC. FILE ON ilco LIMESTONE

INDIANA LIMESTONE COMPANY, INC.
DEPT. AR-556
BEDFORD, INDIANA

Please send me the complete specification file on Indiana (Oolitic) Limestone, at no obligation.

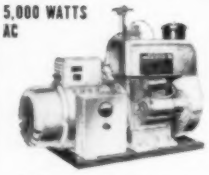
NAME
FIRM NAME
ADDRESS
CITY ZONE STATE

24-page "Specification Manual" discusses the general adaptability of Indiana (Oolitic) Limestone to your work, its physical characteristics, grading, finish, veneer . . . and includes master specification for cut stone fabrication. A second 24-page booklet covers "Cut Stone Setting, Cleaning and Waterproofing." It too contains complete specifications and also covers allied subjects such as efflorescence, structural steel design, mortars and reinforced concrete construction, and roofing and sheet metal work. "Package" includes file folder. Just mail coupon.

ilco INDIANA LIMESTONE COMPANY, INC.
BEDFORD, INDIANA
World's Largest Producers of Building Stone

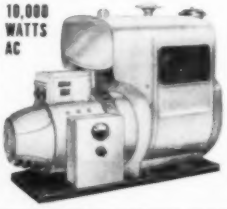
Here's Stand-by Power When You Need It Most

5,000 WATTS AC



OTHER MODELS FROM 500 WATTS to 100 KW—all voltages and phases.

10,000 WATTS AC



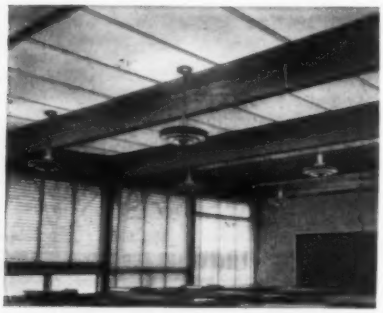
For Homes...Estates...Hospitals Schools...Stores...Hotels Resorts...Theaters...Buildings

Power failures always occur when you least expect them. When a WINPOWER Plant is on the job, it takes over instantly through automatic line transfer controls when regular power fails. No interruption to lighting, heating, refrigeration, elevator operation or other electrical services.

Get the facts about WINPOWER LOW COST STAND-BY GENERATOR PLANTS without cost or obligation. Attach this ad to your letterhead and mail today for illustrated literature and complete information.

WINPOWER MFG. CO.
Dept. G65, Newton, Iowa

HANSOTONE*S "PACKAGED ROOF DECK" combines finished, perforated acoustical ceilings with poured gypsum roof decks AT LOWEST COST!



Monona-Bloomingrove Union High School, Monona, Wis. Architects. Gausewitz & Cashin, Madison, Wis. Contracting Engineers: Anning-Johnson Co., Inc., Chicago, Ill.

SUCCESS STORY of Wisconsin school's Hansotone* poured gypsum roof-deck installation shows Architect, Contractor and School Board all happy with speedy construction, superb acoustical factors, handsome interior finish...achieved at LOW COST using app. 33,000 sq. ft. of BIG SIZE, 1 x 32 x 81" HANSOTONE* Perforated Acoustical FORM-BOARD. Use coupon below for FREE service.

Hansotone Acoustical Formboard is distributed thruout U. S.-Can. by selected, experienced engineering-contracting firms who KNOW HOW to build structural roof decks . . . and maintain them.*

See AIA File 4-L and Sweet's Cat. 2e/Ha.

**Reg. U. S. Pat. Off.*

ELOF HANSSON, INC., Acoustical Dept. 3-6-1
220 EAST 42nd STREET, NEW YORK 17, N. Y.

We would like to hear the complete story on Hansotone Perforated Acoustical Formboard from a local distributor on ..... and/or just send us literature with a FREE 9 x 12" sample for testing.

NAME.....

ADDRESS.....

KEEP AHEAD of competition—find out how to benefit from what's latest and best in plastics. Come to the NATIONAL PLASTICS EXPOSITION, June 11-15, New York Coliseum. See . . . feel . . . hear about new materials, new uses, new equipment. Write for tickets now. Use your company letterhead, please—general public won't be admitted.

Plastics shaping tomorrow's products

at the new New York Coliseum

7th National Plastics Exposition

sponsored by: The Society of the Plastics Industry, Inc.
250 Park Avenue, New York 17, N. Y.

double windows for ALL BUILDINGS . . .

. . . COMPLETE YEAR-AROUND

Fleetlite DOUBLE, DOUBLE-HUNG

ALUMINUM WINDOWS

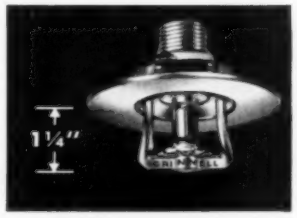
• Whether it's an office building, apartment, dormitory or hospital, your clients want windows that provide beauty and controlled ventilation, yet are maintenance-free and draft-free. Fleetlite double, double-hung windows and screen—complete in one self-storing unit—assure exactly those features. All Fleetlite Aluminum Windows may be cleaned from *inside*, require no painting, putty or storage. Tight seal keeps out winter cold, permits more efficient air conditioning in summer. Wide choice of sizes and types fill every architectural need.

• FOR DETAILED LITERATURE . . . *write to*

Fleetlite AMERICA'S *Finest* WINDOW

FLEET OF AMERICA, INC., 2029 WALDEN AVE., BUFFALO 25, N. Y.

The BEAUTY of Grinnell *Flush-Type* Ceiling Sprinklers

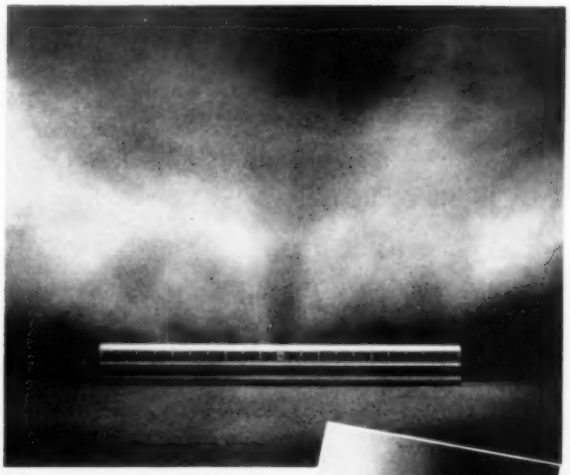


By planning your fire protection in the blueprint stage, you not only get the most efficient protection, but a system that *harmonizes* with interiors.

Because the Grinnell Ceiling Sprinkler only protrudes 1¼" below the ceiling and is available in a variety of finishes and colors, it is the ideal sprinkler for offices, shops, stores, restaurants, lounges, country clubs. It gives reliable, unobtrusive fire protection.

Grinnell Company, Inc., Providence, Rhode Island — manufacturing, engineering and installation of automatic sprinklers since 1878.

GRINNELL
FIRE PROTECTION SYSTEMS



Above diffusion pattern of Lima Series 70 Baseboard Diffuser shows efficient air distribution over wide area. At right shows correct vertical angle to prevent air from striking room occupants. Arrows indicate how room air is recirculated.

for room-wide COMFORT CONTROL

specify *Lima* DIFFUSERS

For both heating and cooling, you can depend on Lima Diffusers to provide efficient distribution of air into the room, plus imperceptible aspiration of air within the room for continuous comfort. Extra sturdy construction prevents rattling and whistling so common with ordinary diffusers.

See the complete line of attractively styled Lima Diffusers, Registers and Grilles for floor, baseboard, wall and ceiling in Sweet's Architectural File 29f/Li or write for catalog.

Lima REGISTER COMPANY
LIMA, OHIO
sold exclusively through heating wholesalers and manufacturers.

FORMING FACTS for ARCHITECTS

Housing electrical service within round concrete columns

The use of SONOTUBE Fibre Forms for round columns of concrete permits the installation of conduits, outlets and other appurtenances in and on the forms before the concrete is poured!

The photo below illustrates the application in a column serving as a base for an exterior lighting fixture.

For exterior or interior columns, "built-in" electrical service helps speed up construction time, saves money and provides an attractive architectural feature.

Low-cost SONOTUBE Fibre Forms provide a fast, economical method of forming round columns of concrete! SONOTUBES are readily available through distributors in the U.S., Canada and Mexico.

For further details write

SONOCO PRODUCTS CO.

CONSTRUCTION PRODUCTS DIVISION

HARTSVILLE, S. C. — MAIN PLANT

LOS ANGELES, CAL. MONTCLAIR, N. J.

5955 SOUTH WESTERN AVE. 14 SOUTH PARK STREET

AKRON, IND. • LONGVIEW, TEXAS

BRANTFORD, ONT. • MEXICO, D. F.

REQUIRED READING

(Continued from page 388)

THE ARCHITECT AS A CLIENT

Architects' Homes. By Robert Winkler. Verlag Girsberger (Zurich) 1955. 222 pp, illus. $10.50. *(U. S. Distributor: Wittenborn & Co., 38 E. 57th St., N. Y. C.)*

THE WHIMS OF THE CLIENT aren't the only factor that prevents a house *design* from realizing the *ideal*. Building regulations for example, place the same limitations on the construction of the architect's own home as they do on the client's. Also the financial restrictions are likely to be greater for many architects on their own home than they are on his client's. The homes of several European architects represented in this book reflect this problem by being part of a row or a group of homes built by them.

Apart from the material factors which affect architect's and client's house alike, it must be recognized that the restraints of the client may keep the designer from becoming too precious. The peculiar requirements of the client or of a site may call for the extra display of ingenuity that would create a better building than the architect simply designing what is most natural for himself.

But because the architect-client can do what comes most natural to him when designing his own home a book such as this should offer the purest example of the architect's individual style. Marcel Breuer for instance, is indeed fortunate that the houses he designs for clients can express so strongly the same style he would — and does — use for his own house. For Phillip Johnson building for himself represents an opportunity to carry the glass box to what must be its ultimate realization.

The opportunity for experimentation certainly must tempt any imaginative architect-client. Indeed, Alvaar Aalto made the courtyard walls of his vacation house a pied sampling of 50 varieties of brick and tile as a test of the materials. Justus Dahinden works the steeply pitched snow-shedding roof of the Alps into a vacation house that is merely a pyramid on stilts.

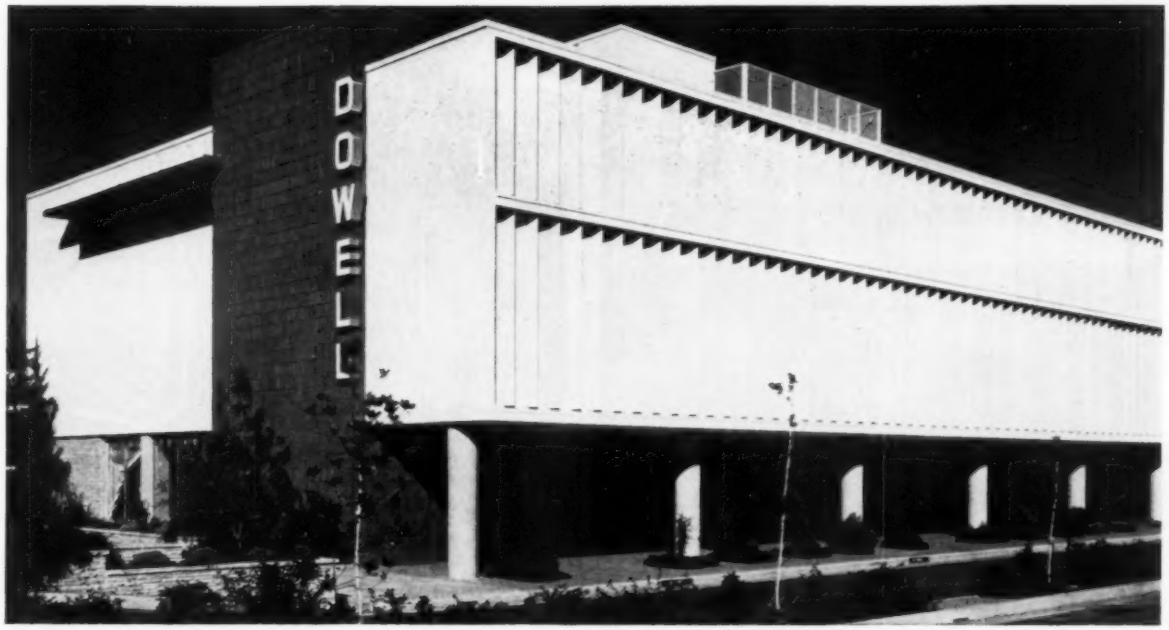
Because of the freedom of expression the architects have had with the houses in this book, grouping them according to areas and to countries within the areas gives a clear sampling of architectural thinking in the various parts of the world. The coverage given each house is quite satisfying. **D. R. Steinbauer**

Fight cancer

with a checkup

and a check!

American Cancer Society



ARCHITECT: DONALD McCORMICK, A.I.A.
BUILDER: DYER CONSTRUCTION CO.

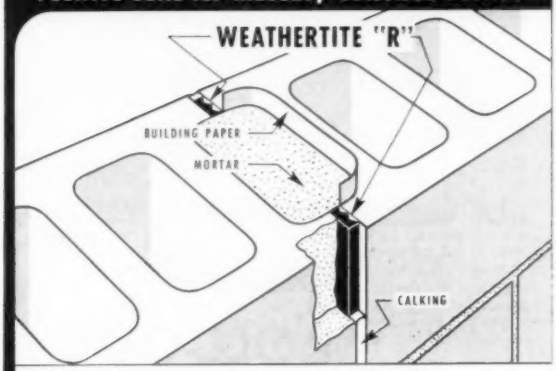
sun control LEMLAR JALOUSIES

Jalousies which adjust to compensate for movement of the sun protect Dowell Co. offices, Tulsa, from direct sunlight, sky glare and solar heat. Added beauty comes with use of vanes in five pastel shades, scatter-arranged, yet cyclic. See Sweet's or write direct for further evidence of Lemlar Jalousie advantages in air conditioning economies, visual comfort and architectural enhancement.

SEE SWEET'S 35-P OR WRITE LEMLAR CORP., P.O. BOX 352, GARDENA, CALIFORNIA

WEATHERTITE

Positive SEAL for Masonry CONTROL JOINTS



To guard against cracks in block-constructed masonry walls, caused by shrinkage, always use an approved Control Joint . . . to prevent water seepage through these very necessary control joints, always use WEATHERTITE for a permanent SEAL. This time-tested product is a continuous strip of expanded Polyvinyl Chloride . . . it is formed with serrations on one side to permit adequate compression when installed, and to provide the positive expansion which so effectively and permanently seals control joints in block constructed masonry walls. WEATHERTITE is available in three sizes which are designed to effectively seal any type of masonry control joint.

See Sweet's Architectural File, Section 9, or write for information.

WILLIAMS EQUIPMENT and SUPPLY COMPANY
16651 Baylis Avenue · Detroit 21, Michigan

ADVERTISEMENT

An old firm of Architects-Engineers with a long record of successful practice and an enviable clientele in a growing city of 300,000 population on the Atlantic Seaboard has, due to retirement of two partners, been placed in need of a real architectural designer.

The opening is admittedly anticipating partnership. The party we are looking for must be a college graduate and preferably a member of A.I.A., capable of taking his place in the community. He should have experience on office buildings, educational institutions and some industrial work, and must be capable of joining with some present employees in assuming ownership and operation of the business.

Replies will be kept confidential and will be expected to lead to interviews.

Address replies to:

Dept. 50
Architectural Record
119 West 40th St.
New York 18, N. Y.

specify...Cabot's

stain, wax and seal in one operation

Cabot's Stain Wax used in this house in Beach Haven, N. J.
Architect: Savery, Scheetz and Gilmour, Philadelphia

Cabot's
STAIN WAX
for paneling, woodwork

Used by leading contractors because it

- Saves time—requires only one easy application
- Gives the rich color of a penetrating stain
- Has the soft lustre of wax
- Brings out the beauty of the wood
- Is suitable for all types of wood
- Gives an easy-to-keep clean finish

Comes in 9 appealing colors, Black, White and Natural

A quality product from Cabot Laboratories
...manufacturing chemists since 1877
Samuel Cabot

Write for color card.

SAMUEL CABOT INC.
529 Oliver Building, Boston 9, Massachusetts

Please send Stain Wax color card.

_____
_____
_____

UP-TO-THE-MINUTE FACTS

ON AUTOMATIC ICE MAKING

It's easy to include automatic ice machines in your planning IF you have the necessary facts and figures. These two bulletins, recently released by Vogt, list sizes and capacities, outline the operation principle and list such specifications as weight, water connections, the refrigerant and electric requirements, etc. Please write for your free copies. Address Dept. 24-RTAR

HENRY VOGT MACHINE CO., Louisville, Ky.
SALES OFFICES: New York, Philadelphia, Chicago, Cleveland
St. Louis, Cincinnati, Dallas, Charleston, W. Va., San Francisco

NONE OF THIS...

When they're CLOSED DECK

HUSSEY SAFE SEATING

ROLL-OUT GYM SEATS

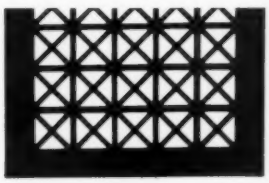
Hussey's space-saving, exclusive "all closed" deck prevents litter collecting under the stand, thus reduces fire hazard, makes it unnecessary to crawl under the seats to recover articles accidentally dropped, eliminates the sense of insecurity many persons have in the open type of deck. They are far safer than any other known design and reduce insurance costs. Ideal for schools, armories, auditoriums, etc.

FOR SPECIFICATIONS SEE SWEET'S CATALOG 23J
OR WRITE, WIRE OR PHONE HU

Hussey Mfg. Co., Inc., 567 R.R. Ave., North Berwick, Me.

For Beauty In Buildings

What makes one building interior stand-out over others? In many cases it's that extra touch of splendor made by the inclusion of Hendrick Grilles. There are over one hundred different Hendrick Grilles available to harmonize with the most modern designs for residential, business or public buildings . . . and many are exclusive Hendrick designs. Each design can be furnished in a wide range of overall dimensions, bar sizes and number of perforations. And they're easy to install because they always lay flat . . . don't bend or warp. Write for complete details.



SEE OUR CATALOG IN SWEET'S

Hendrick
MANUFACTURING COMPANY
38 Dundaff Street, Carbondale, Pa.

Perforated Metal • Perforated Metal Screens • Wedge-Slot and Hendrick Wedge Wire Screens • Architectural Grilles • Mitco Open Steel Flooring • Shur-Site Treads • Armorgrids • Hendrick Hydro-Dehazer

FOR MAXIMUM SAFETY
all over your plant use Safety **GRIP-STRUT**

Pat. Pending

the new basic material, all in one piece (including channels), not welded, riveted or expanded in steel or aluminum, in standard sizes and gauges. Safety GRIP-STRUT presents an open space, in a diamond pattern, in excess of 55% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for work platforms, stair and ladder steps, flooring, balconies, catwalks, machinery guards, fire escapes and for original equipment safety treads.

Work Platforms

Flooring

Machine Guards

Balconies

Important Safety Features

- ★ Fire proof
- ★ Slip proof
- ★ Maximum strength
- ★ Minimum weight
- ★ Easy to stand on
- ★ Cool in summer—warm in winter

Big Economy Features

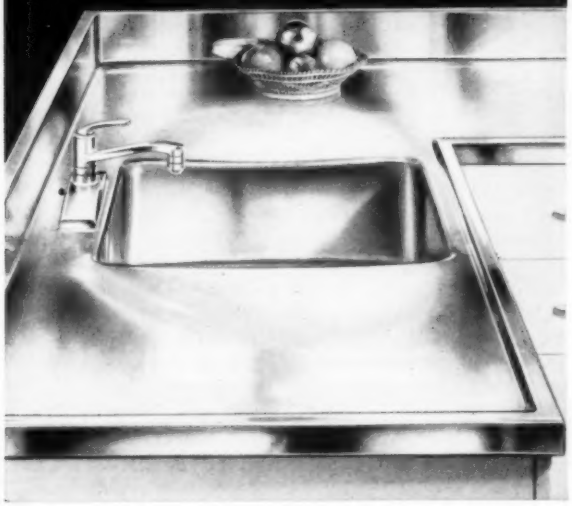
- ★ For balconies—no extra light needed below—no extra heat.
- ★ No extra supports necessary—channels are integral part of the material
- ★ No secondary sprinkler heads needed
- ★ Self-cleaning
- ★ Cut and installed like lumber by your own maintenance force
- ★ Low in original cost

Distributors in all principal cities. Consult yellow pages in phone book under "GRATING."

SEND FOR NEW CATALOG

GRIP-STRUT division
THE GLOBE COMPANY • *Manufacturers since 1914*
4020 S. PRINCETON AVE. • CHICAGO 9, ILL.

THE *best* SINKS ARE STAINLESS SINKS



AND THE *best* STAINLESS STEEL SINKS ARE MADE BY JUST!

STANDARD SIZES or BUILT TO ORDER

Write for FREE Descriptive Bulletin J-101

see our catalog in S or write for copy

NAME _____

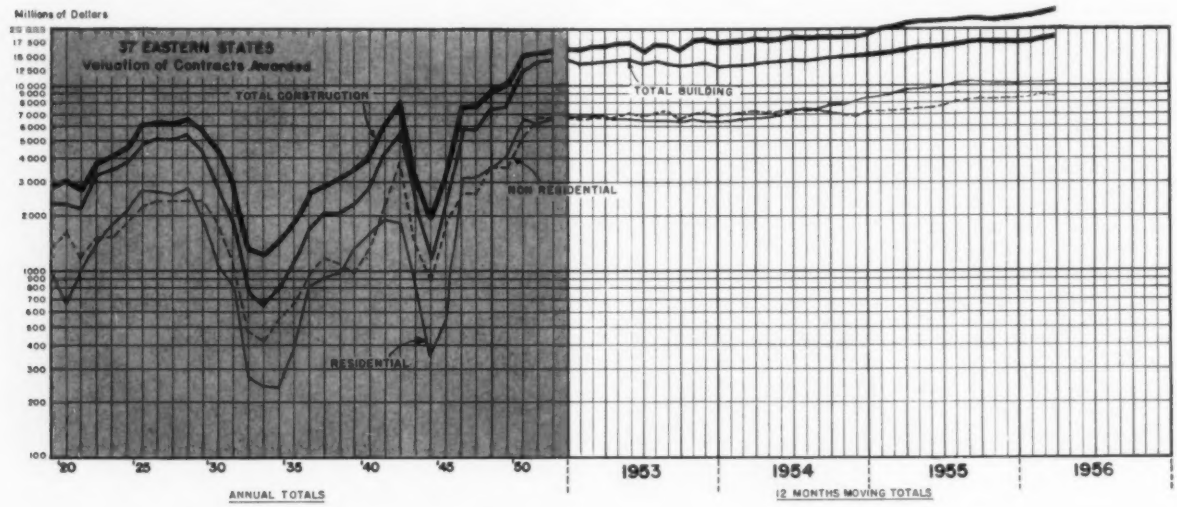
FIRM _____

STREET _____

CITY _____ STATE _____

FACTORY REPRESENTATIVES IN ALL MAJOR CITIES

Just line JL **Just** *Manufacturing Co*
9233 KING AVENUE
FRANKLIN PARK, ILL.



RECORD FIRST QUARTER, WHOPPING BIG MONTH

Charts by Dodge Statistical Research Service

The latest F. W. Dodge figures on construction contracts awarded in the 37 eastern states continue the familiar refrain — more new records, with all three major categories setting their own. A record March total of $2,382,000,000, 12 per cent over the March 1955 figure and the second highest monthly total in Dodge history, rounded out a record first quarter, at $6,100,000,000 up 17 per cent from the 1955 period. By categories, the quarter also set records in nonresidential construction, at $2,172,000,000 up 17 per cent from the first quarter of 1955; residential, at $2,559,000,000 up eight per cent; and heavy engineering, at $1,328,000,000 up 42 per cent. The month of March also set new records in every category and in total awards was second only to May 1951, which had a total abnormally swollen by nearly a billion dollars in government atomic energy contracts. Residential awards in March were the highest for any month in history: at $1,105,000,000 up 12 per cent; nonresidential awards of $881,000,000 were 16 per cent over March of 1955; heavy engineering, at $395,000,000, up two per cent. Dodge Vice Chairman Thomas S. Holden felt the March figures pointed a lesson — "that none of us comprehends quite fully the present growth potentials of the U. S. economy."

Source: F. W. Dodge Corporation

ONE-FAMILY DWELLINGS (OWNER-OCCUPIED)

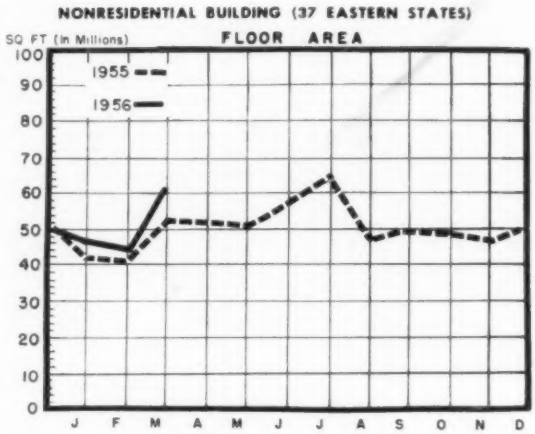
Contracts Awarded—37 Eastern States

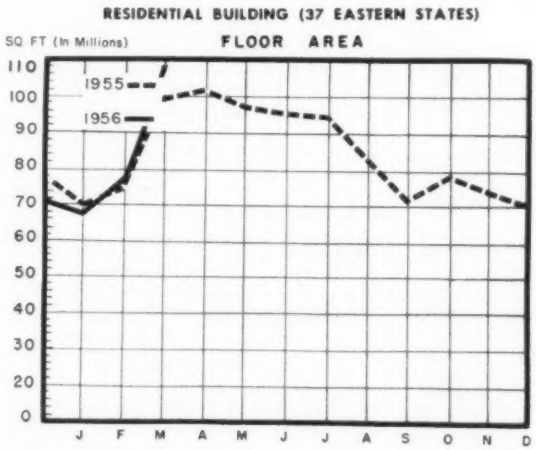
Floor Area (thousands of sq ft)

Year	Annual Total	Monthly Average	Year	Annual Total	Monthly Average
1929	149,914	12,493	1951	171,715	14,310
1935	57,860	4,822	1952	154,873	12,906
1943	1,082	90	1953	163,993	13,666
1947	95,022	7,918	1954	176,831	14,736
1950	211,727	17,644	1955	198,735	16,561

Monthly Totals

1955				1956	
Jan.	9,006	July	19,815	Jan.	7,815
Feb.	9,767	Aug.	18,991	Feb.	9,868
Mar.	17,092	Sept.	16,938	Mar.	17,138
Apr.	22,156	Oct.	16,588	3 months	—34,821
May	22,173	Nov.	15,309		
June	20,702	Dec.	10,198		





Recessed luminaires for the Royal Castle hamburger stands in the Miami, Florida, area by the Wakefield Company, Vermilion, Ohio. "Lucite" acrylic resin extruded by Southern Plastics Company, Columbia, S. C. Irvin Korach, Donald Smith, A.I.A. Architects, Miami.

Better looking, better lighting
with diffusing panels of Du Pont LUCITE®

Everything possible was done to make the recently constructed Royal Castle hamburger stands truly spots "fit for a king." This called for a happy blending of operating efficiency and beauty.

When it came to lighting, the selection was an obvious one . . . the "Castles" get appealing lighting both indoors and out with diffusing panels of extruded "Lucite."

Diffusing panels of "Lucite" acrylic resin transmit optimum light without specular glare or shadow. They are strong, durable, free from discoloration, and dimensionally stable. Installation is a simple matter. Panels of "Lucite" are light in weight and easy to handle . . . maintain their clarity and beauty.

Du Pont "Lucite" can be formed readily into desired shapes and is available in a wide range of transparent and translucent colors.

Send for free, new booklet. This new 12-page illustrated booklet describes all the latest property and application data on "Lucite" acrylic resin for lighting. For your free copy, write to E. I. du Pont de Nemours & Co. (Inc.), Polychemicals Dept., Room 735, Du Pont Building, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

This "Quality Controlled" label may be used only by qualified extruders of Du Pont "Lucite" acrylic resin. It assures the lighting industry that the extruded material conforms to standards for low shrinkage and uniform caliper established by E. I. du Pont de Nemours & Co. (Inc.).

Quality Controlled

INDEX TO ADVERTISING

A Adams & Westlake Company 239
Aerofin Corporation 124
Air Devices Inc. 70
A-IC-LC Airtemp Construction Corp. 322
A All-Steel Equipment Inc. 90
A-IC Allegheny-Ludlum Steel Corp. 294
A Allen, W. D. Mfg. Company 252–253
A-LC AllianceWare, Inc. 130
A-IC-LC Allied Chemical & Dye Corp. 150
Allied Thermal Corp. 29–31
A Alumiline Corporation 386
A-IC Aluminum Co. of America 122–123
A-LC Aluminum Window Mfrs. Association 385
A-IC American Abrasive Metals Co. 260
American Air Filter Co. Inc. 117 to 119
A-IC American Blower Corporation 140
A-LC American Brass Company 22–23
American Cancer Society 392
A-LC American Hardware Corporation 145
American Hot-Dip Galvanizers Assoc. 146
American Louver Company 89
American Machine & Metals Inc. 300
A-LC American Sisalkraft Corp. 40
A-LC American Standard, Plumbing & Heating Div. 98–110
American Steel & Wire 111 to 114
A American Sterilizer Company 272
A-LC Andersen Corporation 282–283
A Anemostat Corp. of America 273
A Arcadia Metal Products 380
Architectural Record 326–327, 368B, 372–373
A Armco Steel Corporation 314
A-IC-LC Armstrong Cork Company 96–97
Arrow-Hart & Hegeman Electric Co. 79
A Art Metal Company 41
Azrock Products Division 93

IC Babcock & Wilcox Co. 83
A-IC Barber-Colman Company 293
A-IC-LC Barrett Division 150
Basic Incorporated 44
A-IC Bayley, William Company 244
A-IC Benjamin Electric Mfg. Co. 26–27
A-IC Bethlehem Steel Company 104–351–371
A Bigelow Rugs & Carpets 250–251
A-IC-LC Bilco Company 108
Blake Whitney Company 46
A Bommer Spring Hinge Co., Inc. 384
A-IC Borden Metal Products Co. 57
A Brunswick-Balke-Collender Co. 298, 299
A-IC Burt Manufacturing Company 276
A Bush Manufacturing Co. 292
A-IC Byers, A. M. Company 4
A Byrne Doors, Inc. 256

A Cabot, Samuel Inc. 394
A-LC California Redwood Association 121
A Cambridge Tile Mfg. Co. 389
Carpet Institute Inc. 78
A-IC-LC Ceco Steel Products Corporation 302–303
A-IC-LC Cedar Rapids Block Co. 146
A-IC Celotex Corporation 332
Certain-teed Products Corp. 368A
A-IC-LC Chrysler Corp. 322
Competition Home for the Aged 326–327
A-IC Concrete Reinforcing Steel Institute 317
A Connor Engineering Corporation 385
A-IC Cordley & Hayes 378
Couch, S. H. Company, Inc. 330
A-IC-LC Crawford Door Co. 246
A-IC-LC Cupples Products Corp. 87
A Curtis Companies Service Bureau 355
A Curtis Lighting Inc. 242
A Cutler Mail Chute Co. 385

A Davidson Enamel Products Inc. 260–261
A Dicks-Pontius Company 376
Dodge Books 356–378–383
A Dor-O-Matic Division 350
A-IC-LC Dow Chemical Company 65 to 68, 310–311
Du Pont, I. I. de Nemours & Co., Polychemicals Dept. 397
A-IC-LC Dur-O-wal Products, Inc. 146

Economy Engineering Co. 354
Elastizell Corp. of America 380
Electro Silv-A-King Corporation 328
A-LC Eljer Division 103
A Erie Enameling Company 240

A-IC Facing Tile Institute 88
A Fairhurst, John T. Co., Inc. 358
Fannon, John J. & Co. 315
A Fenestra Incorporated 126 to 129
A Fiat Metal Manufacturing Company 91
A Fleet of America, Inc. 391
A Flour City Ornamental Iron Company 120
A Flynn, Michael Mfg. Co. 131
A Formica Company 259
A-IC-LC Frigidaire Division 85

A General Bronze Corporation 99
A-IC General Electric Co., Air Conditioning 297
A-IC General Electric Co., Apparatus 286–287–323
General Electric Co., Construction Materials 368
General Electric Co., Air Conditioners 34–35
A-IC-LC General Motors Corporation 85
General Precision Laboratory Incorporated 321
General Time Corp. 304
A Getty H. S. & Co. Inc. 364
Gibson Manufacturing Co. 139
Glide Windows, Inc. 55
Glidden Company 340
Globe Company 395
A Goodrich Company, B. F. 331
A-IC Grinnell Company 391
Guth, Edwin F. Company 37

Hamilton Mfg. Co. 324
A Hansson, Elof, Inc. 390
A-IC Hauserman, E. F. Company 1
A Haws Drinking Faucet Company 334
A-IC Hendrick Manufacturing Co. 395
A Hillyard Chemical Co. 281
Holophane Company, Inc. 375
A-LC Hope's Windows, Inc. 336
A Horn Division 298–299
Hotel Cleveland 387
Hotel Pittsburgher 386
Huntington Chair Co. 296
A Huntington Laboratories 320
A Hussey Mfg. Co. 394

A Indiana Limestone Company, Inc. 390
Infra Insulation, Inc. 13
A-IC-LC Inland Steel Products Co. 345–400
A-IC International Steel Company 284

A-LC Jackson & Church Co., Furnace Div. 388
A Jamison Cold Storage Door Co. 134
A Janitrol Heating & Air Conditioning Division 290–291
Jenn-Air Products Co., Inc. 136
A-IC Johns-Manville 305–387
Johnson Service Company 107
A-IC Josam Manufacturing Co. 383
A Just Mfg. Co. 395

A-IC Kaiser Aluminum & Chemical Sales, Inc. 38–39
A Kawneer Company 71 to 76
Kayline Company 386
A-IC-LC Keasbey & Mattison Company 279
A Kelley Island Division 44
IC Kendall Company 377
A-LC Kentile, Inc. 17
A-IC Kewanee Boiler Division 110
Kohler Co. 100
A-IC Koppers Company, Inc. 132

A LCN Closers, Inc. 248–249
A L-O-F Glass Fibers Company 148
Lehigh Portland Cement Company 144
A Lemlar Corporation 393
A-IC Lewis Asphalt Engineering Corp. 301
A-IC-LC Libbey-Owens-Ford Glass Company 148–359
A Lima Register Company 391
Liquidometer Corp. 280
A Lockwood Hardware Mfg. Co. 115
A-LC Louisville Cement Company 95
A Lowell Manufacturing Co. 309
A Lumenated Ceiling Div. Thermotank Inc. 315

Maas & Waldstein Co. 16A
A-IC Macomber, Inc. 102
Magee Carpets & Rugs 116
A-IC Mahon, R. C. Company 62–63
A-IC Marlo Coil Company 288
A-IC Marmet Corporation 389
A-IC Master Builders Co. 2nd Cover
A Mastic Tile Corporation of America 3rd Cover
A McKee Door Company 386
A McPhilben Mfg. Co. 388
A Meadows, W. R. Inc. 64
A Medart, Fred Products Co., Inc. 149
A Michaels Art Bronze Co., Inc. 338
A-IC Mills Company 14–15
A Minneapolis Honeywell Regulator Co. 274–275
A-IC-LC Mississippi Glass Company 325
A-IC Modine Mfg. Co. 381
A-IC-LC Monsanto Chemical Company 343
A Montgomery Elevator Company 138
A Mosaic Tile Company 367
A Moultile Incorporated 20
A-IC Mueller Climatrol 337
A-LC Murray Corporation of America 103

National Association of Plumbing Contractors 86
A-IC National Electric Products Corp. 84
A-IC-LC National Gypsum Company 109–341
Natural Slate Blackboard Co. 370
Nelson Herman Division 117 to 119
A Neo-Ray Products, Inc. 353
Nesbitt, John J., Inc. 47
A New Castle Products Inc. 333
A Nicholson, W. H. & Company 106
Northern Indiana Brass Company 247

A Overly Manufacturing Company 379

A Panelfab Products Inc. 7
Parker Rust Proof Company 361
A Pass & Seymour, Inc. 264
A Penn Metal Company, Inc. 94
A Permaglas Division 143
Pilkington Brothers Limited 357
Pioneer Plastics Corporation 383
A-IC Pittsburgh Corning Corporation 125–257
A-LC Pittsburgh Plate Glass Co. 82–335
Polyken Products Dept. 377
A Portland Cement Association 277
A Powers Regulator Co. 45–263
A Pratt & Lambert, Inc. 348
A Pressstite Engineering Company 316

A-IC-LC Raynor Mfg. Co. 366
A Republic Industries, Inc. 350
A-LC Republic Steel Corp. 254–255
A-IC-LC Revere Copper & Brass Inc. 306–307
A-LC Reynolds Metals Co. 318–319
A-IC Reznor Manufacturing Company 329
A Rilco Laminated Products Inc. 258
A Rixson, Oscar C. Company 92
Robbins Flooring Company 352
A-IC Robertson, H. H. Company 369
A-LC Roddis Plywood Corporation 141–142–147
Roebling's, John A. Sons Corporation 77
A Rohm & Haas Company 18–19
A-LC Rolscreen Company 347
A-IC Rotary Lift Company 2–3
A-LC Russell & Erwin Division 145

A St. Charles Manufacturing Company 344
A-IC Sanymetal Products Co. Inc. 61
Sarco Company Inc. 285
Sarcotherm Controls Inc. 285
Sargent & Greenleaf, Inc. 360
A Schlage Lock Company 362
Schundler, F. E. & Company, Inc. 270–271
A Shaw-Perkins Mfg. Co. 48
Silvray Lighting Co. 363
A-IC Sloan Valve Company 4th Cover
A Smith, A. O. Corporation 143
Society of the Plastics Industry 390
A Sonneborn, L. Sons Inc. 133
Sonoco Products Co. 392
Square D Company 137
A Stanley Works 25
A-IC Steel City Electric Co. 265
Stelzer Moldings 346
Stem, Chester B., Inc. 58–59
A-LC Sterling Hardware Mfg. Co. 105
Stromberg Time Corporation 304
A Structural Slate Co. 370
Sump-Pumps Inc. 382
A-LC Superior Electric Company 33
A Surface Coatings Inc. 289
A Surface Combustion Corp. 290–291
A Swedish Crucible Steel Company 135
Sylvania Electric Products, Inc. 49 to 54

A-IC Taylor, Halsey W. Co. 268
A Thermotank Inc. 315
A-LC Thrush, H. A. & Company 278
A Tile Council of America 295
A-LC Timber Engineering Co. 376
A-IC Timber Structures, Inc. 339
A Titus Manufacturing Corp. 80–81
A Tremco Manufacturing Company 374
Troy Laundry Machinery 300
A Tuttle & Bailey Division 29–30–31

Underwood Corporation 312
A United States Ceramic Tile Co. 313
A-IC United States Gypsum 266–267
A-LC United States Plywood Corp. 349
IC United States Steel Corp., Subsidiaries 111 to 114
A Uvalde Rock Asphalt Company 93

A Versen, Kurt Co. 382
Vogt, Henry Machine Co. 394
A Vonnegut Hardware Co. 387

A-IC Wade Manufacturing Corp. 342
A-LC Ware Laboratories, Inc. 8
A Wasco Products, Inc. 308
A Washington Steel Corporation 384
A Wayne Iron Works 69
Weatherstrip Research Institute 101
A Weis, Henry Mfg. Co. Inc. 365
Western Pine Association 138
A Westinghouse Electric Corp. 399
A Wheeling Corrugating Co. 269
Wheelock Signals 389
A Williams Equipment and Supply Company 393
Winpower Mfg. Co. 390
A-IC Wolman Preservative Dept. 132

A-IC-LC Zonolite Company 42–43
A Zurn, J. A. Mfg. Co., Plumbing Div. 98

MANUFACTURERS' PRE-FILED CATALOGS

Catalogs of the firms listed below are available in the 1956 Sweet's Catalog Files as follows: (A) Architectural File (green), (IC) Industrial Construction File (blue), (LC) Light Construction File (yellow)

A-IC-LC Raynor Mfg. Co. 366
A Republic Industries, Inc. 350
A-LC Republic Steel Corp. 254–255
A-IC-LC Revere Copper & Brass Inc. 306–307
A-LC Reynolds Metals Co. 318–319
A-IC Reznor Manufacturing Company 329
A Rilco Laminated Products Inc. 258
A Rixson, Oscar C. Company 92
Robbins Flooring Company 352
A-IC Robertson, H. H. Company 369
A-LC Roddis Plywood Corporation 141–142–147
Roebling's, John A. Sons Corporation 77
A Rohm & Haas Company 18–19
A-LC Rolscreen Company 347
A-IC Rotary Lift Company 2–3
A-LC Russell & Erwin Division 145

A St. Charles Manufacturing Company 344
A-IC Sanymetal Products Co. Inc. 61
Sarco Company Inc. 285
Sarcotherm Controls Inc. 285
Sargent & Greenleaf, Inc. 360
A Schlage Lock Company 362
Schundler, F. E. & Company, Inc. 270–271
A Shaw-Perkins Mfg. Co. 48
Silvray Lighting Co. 363
A-IC Sloan Valve Company 4th Cover
A Smith, A. O. Corporation 143
Society of the Plastics Industry 390
A Sonneborn, L. Sons Inc. 133
Sonoco Products Co. 392
Square D Company 137
A Stanley Works 25
A-IC Steel City Electric Co. 265
Stelzer Moldings 346
Stem, Chester B., Inc. 58–59
A-LC Sterling Hardware Mfg. Co. 105
Stromberg Time Corporation 304
A Structural Slate Co. 370
Sump-Pumps Inc. 382
A-LC Superior Electric Company 33
A Surface Coatings Inc. 289
A Surface Combustion Corp. 290–291
A Swedish Crucible Steel Company 135
Sylvania Electric Products, Inc. 49 to 54

A-IC Taylor, Halsey W. Co. 268
A Thermotank Inc. 315
A-LC Thrush, H. A. & Company 278
A Tile Council of America 295
A-LC Timber Engineering Co. 376
A-IC Timber Structures, Inc. 339
A Titus Manufacturing Corp. 80–81
A Tremco Manufacturing Company 374
Troy Laundry Machinery 300
A Tuttle & Bailey Division 29–30–31

Underwood Corporation 312
A United States Ceramic Tile Co. 313
A-IC United States Gypsum 266–267
A-LC United States Plywood Corp. 349
IC United States Steel Corp., Subsidiaries 111 to 114
A Uvalde Rock Asphalt Company 93

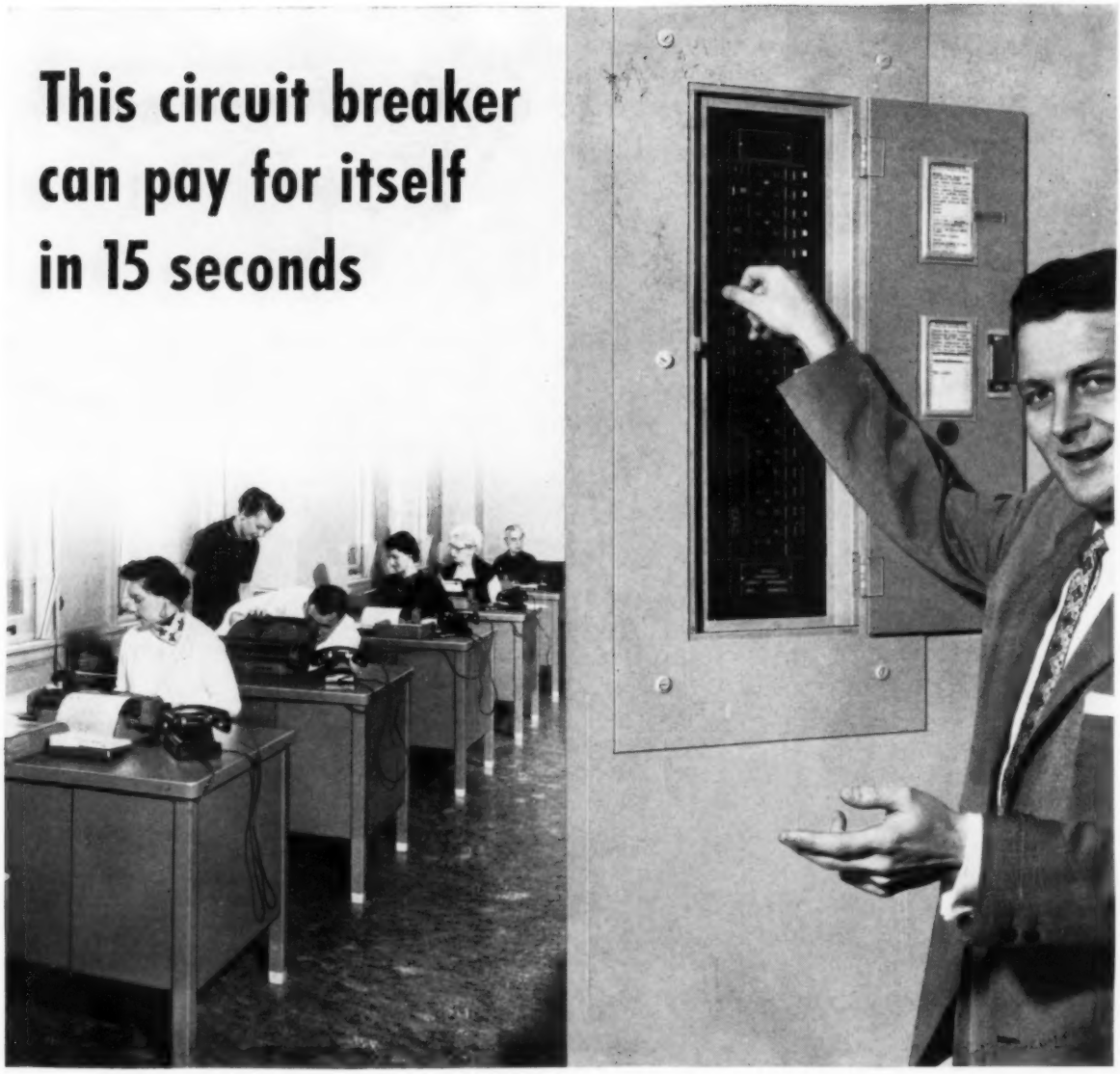
A Versen, Kurt Co. 382
Vogt, Henry Machine Co. 394
A Vonnegut Hardware Co. 387

A-IC Wade Manufacturing Corp. 342
A-LC Ware Laboratories, Inc. 8
A Wasco Products, Inc. 308
A Washington Steel Corporation 384
A Wayne Iron Works 69
Weatherstrip Research Institute 101
A Weis, Henry Mfg. Co. Inc. 365
Western Pine Association 138
A Westinghouse Electric Corp. 399
A Wheeling Corrugating Co. 269
Wheelock Signals 389
A Williams Equipment and Supply Company 393
Winpower Mfg. Co. 390
A-IC Wolman Preservative Dept. 132

A-IC-LC Zonolite Company 42–43
A Zurn, J. A. Mfg. Co., Plumbing Div. 98

NEW YORK—H. Judd Payne, Publishing Director; Robert F. Marshall, General Manager; Tom Tredwell, Advertising Mgr.; Richard C. Crabtree, Sales Service Mgr.; Benton B. Orwig, Director of New Business Development; M. A. Murphy, Advertising Production Manager; Harry M. Horn, Jr.; James E. Boddorf, 119 W. 40 St.; **BOSTON**—Harry M. Horn, Jr., 855 Park Square Bldg.; **BUFFALO**—Benton B. Orwig, 70 Niagara St.; **CHICAGO**—Claude B. Riemersma, Regional Sales Manager; Robert T. Franden, David K. Bortz, James A. Anderson, Charles L. Reed, Jr., 700 Merchandise Mart; **CLEVELAND**—John C. Jackson, Regional Sales Manager; Joseph F. Palmer, Louis F. Kutscher, 321 Hanna Bldg.; **LOS ANGELES**—Bob Wettstein, 672 South Lafayette Park Place; **MIAMI**—Benton B. Orwig, 802 N. W. First St.; **PHILADELPHIA** • Tom Tredwell, 1321 Arch St.; **PORTLAND**—Bob Wettstein, 921 S. Washington St.; **ST. LOUIS**—Claude B. Riemersma, Clifford M. Kelly, 731 Olive St.; **SAN FRANCISCO**—Bob Wettstein, Howard Bldg., 209 Post St.

This circuit breaker can pay for itself in 15 seconds



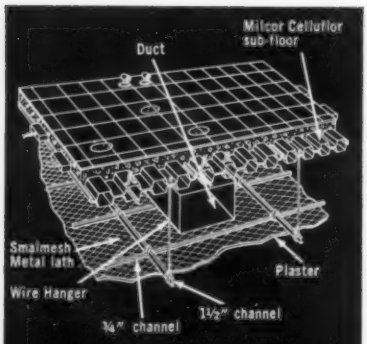
Snap! And the power is on again. It's that simple with a Westinghouse AB De-ion® circuit breaker. Unlike other protective devices, it quickly restores power with just a simple flick of the finger—no valuable time wasted looking for fuses, no fuse replacement costs, no need even to call a maintenance man. The trip position of the breaker handle quickly identifies the affected circuit.

Today's buildings—with a wide range of electrical equipment from fans to floodlights—require positive insurance against overloads and short circuits. And when overloaded circuits go dead and business stops cold, that's when Westinghouse circuit breaker protection pays for itself many times over by restoring electrical service quickly, effortlessly—with practically no loss of valuable time.

When you consider circuit protection for today's buildings, it will pay you (and your clients) to specify Westinghouse AB circuit breakers. Your Westinghouse representative can offer you a complete range of circuit breakers for every application. Call him, or write to: Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pennsylvania. J-30193

WATCH WESTINGHOUSE!

*WHERE **BIG** THINGS ARE HAPPENING FOR **YOU***



Versatile concealment for ducts and service equipment

Crack-resistant, fire-safe ceilings of Milcor Metal Lath and plaster give you complete freedom of design

A suspended ceiling of Milcor Metal Lath readily takes any attractive form — arched, groined, coffered, or domed. It is light in weight, easily erected, and economical. And it qualifies for fire-ratings up to four hours, depending upon type and thickness of plaster used.

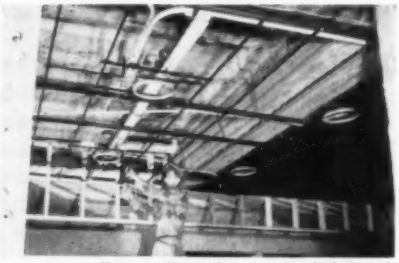
Pound for pound, no other construction offers fire-ratings equal to metal lath and plaster. This factor is especially important in remodeling, where weight must be restricted to the structural limits of the existing frame.

Milcor Catalog No. 202 illustrates and describes the complete line of Milcor Metal Lath and accessories. Copies are available upon request, or consult Sweet's.

MILCOR® Metal Lath

This view of a suspended metal-lath-and-plaster ceiling shows how the back surface of the plaster becomes permanently keyed to the metal lath.

This plasterer is using a machine to apply gypsum-lightweight-aggregate plaster on a suspended ceiling.



Here, a lather is tying a cold-rolled channel framework from wire hangers during initial steps in building a suspended metal-lath-and-plaster ceiling, to conceal service equipment.

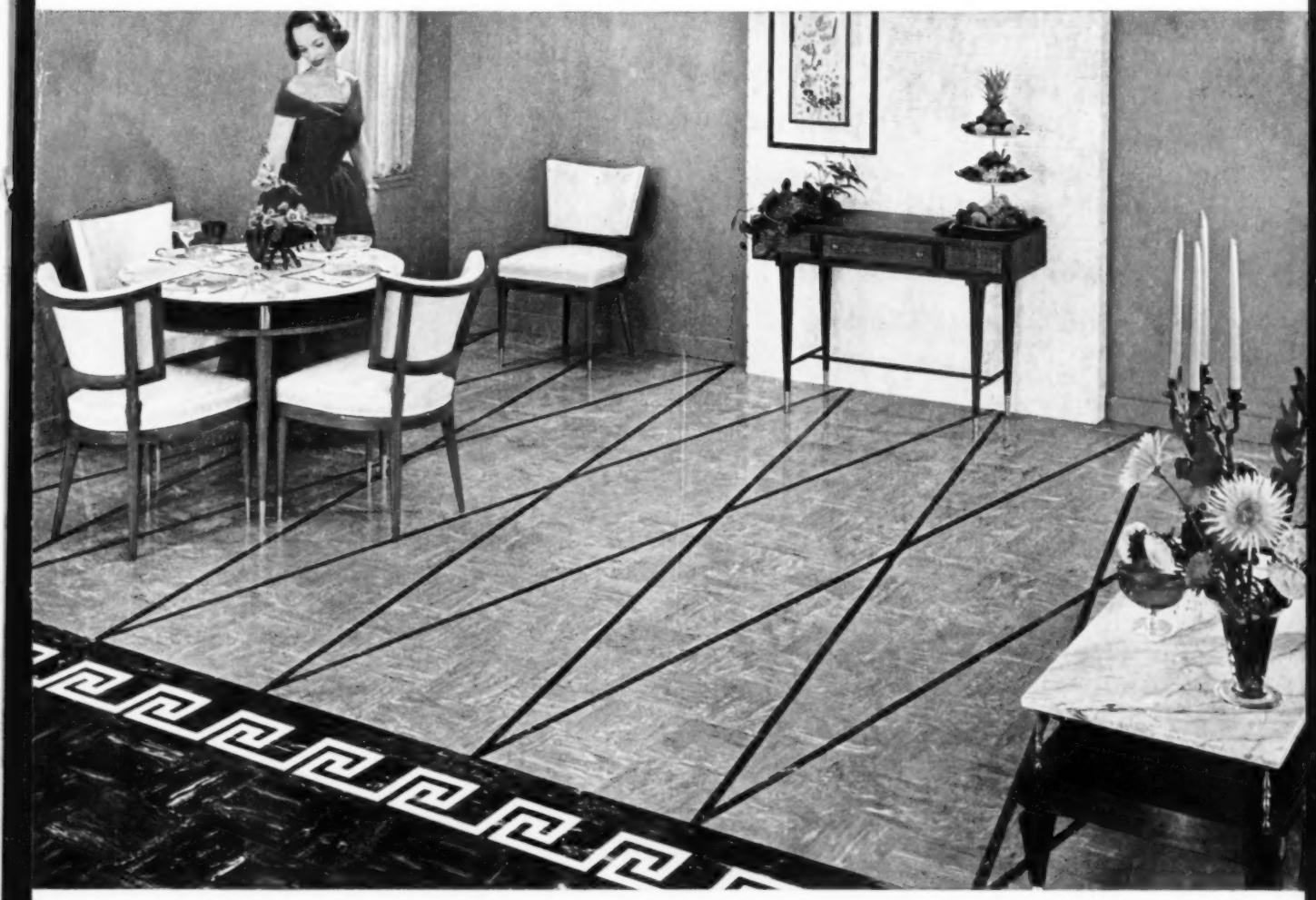
INLAND STEEL PRODUCTS COMPANY

DEPT. E, 4033 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN

OFFICES IN: BALTIMORE • BUFFALO • CHICAGO • CINCINNATI • CLEVELAND DALLAS • DETROIT • KANSAS CITY • LOS ANGELES • MILWAUKEE MINNEAPOLIS • NEW YORK AND ST. LOUIS. M-174

A DISTINGUISHED NEW FLOORING

Designed for Luxury... Destined for Fame



new MATICO **wearever** all-vinyl tile

Before you select flooring for your next project, be *sure* to acquaint yourself with MATICO's WEAREVER all-Vinyl Tile. For here, indeed, is a new achievement in luxury, beauty and distinction in flooring—for virtually every type of installation.

Best of all, this beauty is life-long, because of the outstanding serviceability that WEAREVER all-Vinyl Tile offers. No floor cleans more easily or requires less maintenance. It resists grease, grime and most household chemicals.

MATICO WEAREVER all-Vinyl Tile is a safe and trouble-free flooring always. And because it is a truly *homogeneous* vinyl, its natural lustre gleams uniformly over the entire floor surface.

See for yourself what a major flooring accomplishment WEAREVER all-Vinyl Tile really is. Mail coupon today for full information on new WEAREVER all-Vinyl Tile.

MASTIC TILE CORPORATION OF AMERICA HOUSTON, TEX. • JOLIET, ILL. • LONG BEACH, CALIF. • NEWBURGH, N. Y.

QUALITY CONTROLLED MATICO PRODUCTS Guaranteed by Good Housekeeping

Asphalt Tile
Confetti
Aristoflex
Maticork
Parquetry
Rubber Tile
Vinyl Tile
Cork Tile
Plastic Wall Tile

MASTIC TILE CORPORATION OF AMERICA
Dept. 8-5, P. O. Box 986, Newburgh, New York

Please send me full information on
MATICO WEAREVER all-Vinyl Tile.

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

CA 960

RUMFORD PRESS
CONCORD, N. H.

THE VAST MAJORITY OF THE NATION'S FINE BUILDINGS ARE SLOAN EQUIPPED

WELTON BECKET & ASSOCIATES
architects and engineers
C. L. PECK COMPANY
general contractor
STATE PLUMBING & HEATING CO.
plumbing contractor
KEENAN PIPE & SUPPLY CO.
plumbing wholesaler
AMERICAN RADIATOR & STANDARD SANITARY CORP.
plumbing fixtures

WORLD'S FIRST ROUND OFFICE BUILDING

• The new multi-million dollar CAPITOL RECORDS building in Hollywood has given new allure to famed "Hollywood and Vine" intersection. Aside from symbolizing the company's product, the circular design was developed to achieve economies in construction, operation and maintenance, plus maximum utilization of space and efficiency in its use. Service facilities—stairs, elevators, wash rooms, duct shafts—are located in a central core. The heating and cooling supply lines being equi-distant from outer walls, all-season comfort is provided at lower cost. "Eyebrows," or louvres which overhang the windows, add to exterior attractiveness and serve to protect the interior against heat and glare from the sun. This twelve story "stack of records" is topped by a 100-ft. perforated aluminum trylon. In a building so expertly planned for efficiency and economy it seems logical to find it equipped with SLOAN *Flush* VALVES famous for these same values.

SLOAN *Flush* VALVES

FAMOUS FOR EFFICIENCY, DURABILITY, ECONOMY

SLOAN VALVE COMPANY • CHICAGO • ILLINOIS

Another achievement in efficiency, endurance and economy is the SLOAN *Act-O-Matic* SHOWER HEAD, which is automatically self-cleaning each time it is used! No clogging. No dripping. Architects specify, and Wholesalers and Master Plumbers recommend the *Act-O-Matic*—the better shower head for better bathing.

Write for completely descriptive folder